

**The 'understandability' phenomenon: Do older adults
believe depression is a normal part of old age?**

Jim Law

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CONTENTS

	Page
LIST OF FIGURES	v
LIST OF TABLES	vi
ACKNOWLEDGEMENTS	vii
DECLARATION	ix
ABSTRACT	x
 CHAPTER 1. INTRODUCTION	 1
1.1 The demographic context	2
<i>1.1.1 World population trends</i>	2
<i>1.1.2 Population ageing</i>	3
1.2 Myths of ageing	5
<i>1.2.1 Negative self-perceptions of ageing</i>	6
1.3 Late life depression	8
<i>1.3.1 Definitions of depression</i>	8
<i>1.3.2 The cognitive model of depression</i>	9
<i>1.3.3 Symptom presentation in late life depression</i>	11
1.4 Aetiology of late life depression	15
<i>1.4.1 Psychosocial risk factors</i>	16
<i>1.4.2 Biological risk factors</i>	17
1.5 Prevalence of late life depression	19
<i>1.5.1 A note on the comorbidity of depression and anxiety disorders in late life</i>	19
<i>1.5.2 Prevalence of depression in community samples</i>	20
<i>1.5.3 Incidence of depression in community samples</i>	21
<i>1.5.4 Depression and comorbid medical illness</i>	22
<i>1.5.5 Prevalence of depression in long-term care</i>	23
1.6 The impact of late life depression	24
<i>1.6.1 Depression and disability</i>	24
<i>1.6.2 Depression and non-suicidal mortality</i>	25

1.6.3	<i>Depression and suicide</i>	26
1.6.4	<i>Chronicity of late life depression</i>	27
1.6.5	<i>Depression and health service use</i>	28
1.7	Treatment of late life depression	29
1.7.1	<i>Physical treatments</i>	29
1.7.2	<i>Psychotherapy for late life depression</i>	30
1.7.3	<i>The under-detection and under-treatment of late life depression</i>	31
1.8	The understandability phenomenon	32
1.9	Research aims, questions and hypotheses	36
1.9.1	<i>Research aim</i>	36
1.9.2	<i>Research questions and hypotheses</i>	36
CHAPTER 2.	METHOD	39
2.1	Design	39
2.1.1	<i>Ethical approval</i>	39
2.2	Participants	39
2.2.1	<i>Inclusion and exclusion criteria</i>	39
2.2.2	<i>Depressed sample</i>	40
2.2.3	<i>Non-depressed sample</i>	40
2.3	Measures	41
2.3.1	<i>Demographic information</i>	41
2.3.2	<i>The understandability measure</i>	41
2.3.3	<i>Geriatric Depression Scale</i>	43
2.3.4	<i>Beck Hopelessness Scale</i>	43
2.3.5	<i>Attitudes to own ageing sub-scale</i>	44
2.3.6	<i>The Rame Questionnaire</i>	44
2.3.7	<i>The 6 Item Cognitive Impairment Test</i>	45
2.4	Pilot-test	46
2.5	Procedure	46
2.5.1	<i>Depressed group</i>	46
2.5.2	<i>Non-depressed group</i>	47

CHAPTER 3.	RESULTS	48
3.1	Statistical analysis	48
3.2	Sample characteristics	49
3.2.1.	<i>Total sample</i>	49
3.2.2.	<i>Non-depressed group</i>	49
3.2.3	<i>Depressed group</i>	49
3.2.4	<i>Demographic characteristics</i>	50
3.3	Reliability analysis of the measure of understandability	51
3.4	Main hypotheses and research questions	51
3.4.1	<i>Understandability phenomenon and depression</i>	51
3.4.2	<i>Understandability phenomenon and hopelessness</i>	54
3.4.3	<i>Understandability phenomenon and attitudes to own ageing</i>	56
3.4.4	<i>Understandability phenomenon and internalised ageism</i>	57
3.5	Other findings	58
3.5.1	<i>Demographic correlates of the understandability phenomenon</i>	58
3.5.2	<i>Intergenerational negative bias</i>	60
3.6	Summary of findings	61
CHAPTER 4.	DISCUSSION	63
4.1	Endorsement of the understandability phenomenon	63
4.2	Is the understandability phenomenon a function of depression?	63
4.3	Is the understandability phenomenon an ageist misconception?	65
4.4	Clinical implications	66
4.5	Demographic correlates of the understandability phenomenon	67
4.6	Alternative explanations for the results	68
4.7	Limitations	69

4.7.1 <i>Statistical power analysis</i>	69
4.7.2 <i>Cross-sectional designs</i>	69
4.7.3 <i>Recruitment</i>	70
4.7.4 <i>The sample</i>	71
4.7.5 <i>The measures</i>	72
4.8 Conclusions and recommendations for future research	73
REFERENCES	76
APPENDICES	90
Appendix 1 Summary of focus group results	90
Appendix 2 Information sheet for Highland and Fife	91
Appendix 3 Consent form for Highland and Fife	92
Appendix 4 Demographic interview	93
Appendix 5 Measure of understandability phenomenon	94
Appendix 6 Geriatric Depression Scale	95
Appendix 7 Beck Hopelessness Scale	96
Appendix 8 Attitudes to own ageing sub-scale	97
Appendix 9 Rame Questionnaire	98
Appendix 10 Six Item Cognitive Impairment Test	99
Appendix 11 Summary table for ANCOVA (Hypothesis 1)	100
Appendix 12 Summary table for ANCOVA (Hypothesis 3)	101
Appendix 13 Summary table for ANCOVA (Hypothesis 4)	102

LIST OF FIGURES

	PAGE
Figure 1. Median age by selected major area, 1950-2050 (source: UN, 2003)	4
Figure 2. Changing influence of psychological and biological factors and stressful life events on depression throughout the life-span. Adapted from Karel (1997; p855)	15
Figure 3. Number of young-old and old-old participants agreeing with each of the three attitude to depression statements	59

LIST OF TABLES

		PAGE
Table 1.	References to the understandability phenomenon in relation to depression and suicidal ideation in older adults	34
Table 2.	Demographic characteristics of participants by depressed and non-depressed groups	50
Table 3.	Means and SD's of GDS scores by depressed and non-depressed group	52
Table 4.	Pooled responses of participants by depressed and non-depressed group for each of the understandability statements	53
Table 5.	Unadjusted and adjusted means by depressed and non-depressed groups for the understandability measure	54
Table 6.	Pearson r correlations for hopelessness and understandability scores by depressed and non-depressed groups	55
Table 7.	Means and SD's of hopelessness scores by depressed and non-depressed groups	56
Table 8.	Unadjusted and adjusted means for attitudes toward own ageing by level of belief in the understandability of depression	57
Table 9.	Unadjusted and adjusted means for internalised ageism by	58

level of belief in the understandability of depression

Table 10.	Means and SD's of the independent variables and marital status by age category (young-old, old-old)	60
Table 11.	Participants' responses to the intergenerational bias statements	61

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For Kirsten an older adult in the 2070s.

“This thesis has been composed by myself
and the work contained herein is my own”

Signed:

Jim Law

Abstract

The “understandability phenomenon” as defined by Blanchard (1992) is the notion that older adults believe depression is a normal consequence of old age. The concept is referred to frequently in the gerontology literature as one of the factors responsible for the under detection and under treatment of late life depression. However, there is little empirical evidence to support this concept. This study assessed the understandability of late life depression in a sample of community dwelling depressed and non-depressed older adults. A measure was developed which examined older adult’s belief in the understandability of depression. Specifically, the items in the measure covered depression as a natural consequence of old age, low expectations of treatment, and accepting there are good reasons for depression in late life. Two explanations for the phenomenon were tested. It was hypothesised that the understandability phenomenon is a negative cognition associated with depression. Second, it was also hypothesised that the understandability phenomenon is a function of older adult’s beliefs about ageing and old age. It was found that the understandability phenomenon was not related to depression but was related to older adults beliefs about their own ageing. The clinical implications of older adults belief in the understandability of late life depression are discussed.

Chapter 1. Introduction

Depression is the leading cause of psychiatric morbidity in late life and its impact is significant. It is associated with a decline in general well-being, quality of life, and increased mortality, both by suicide and by natural causes. Despite the availability of effective interventions for depression, only a minority of older people receive treatment resulting in unnecessary distress, and associated costs. One reason, for this situation, is that, it is thought older people may hold attitudes that prevent them from obtaining treatment. Specifically, older people may believe depression is to be expected and is an understandable consequence of normal ageing. Blanchard (1992) termed this the “understandability phenomenon” and various contributors have suggested that it may be one of the reasons why older people often do not report depression or suicidal ideation to their General Practitioner (GP). As such, if the understandability phenomenon exists it may prevent older adults from obtaining effective treatment for late life depression and therefore it merits further investigation. Furthermore, the understandability phenomenon is a concept referred to frequently in the gerontology literature but there is a scarcity of empirical evidence supporting the existence of this concept. This paper is an attempt to operationalise the “understandability phenomenon” and determine if older adults do indeed believe depression is a normal consequence of ageing. A secondary aim is to examine the relationship between clinical, cognitive, and demographic variables and the understandability phenomenon. Given that demographic evidence indicates worldwide people aged 60 years and above are the fastest growing section of the population, it is likely that the personal and societal burden of late life depression will increase. Therefore, it is very important to understand late life depression and the understandability phenomenon.

1.1 The demographic context

1.1.1 World population trends

The recent publication of the 2002 Revision of the United Nations population estimates and projections, prepared by the United Nations Population Division (UN, 2003), confirmed the findings of previous UN population reports. Principally, that globally fertility continues to decline and life expectancy continues to increase.

At the global level, total fertility, which is the average number of children per woman at the end of the reproductive period, is expected to decline from 2.8 children per woman in 2000 to 2.02 children per woman in 2050. In addition, life expectancy, which is the average number of years of life expected at birth subject to normal mortality rates, is expected to rise from 65 years in 2000 to 74 years in 2050. Despite the decline in fertility the world population is expected to increase from 6.3 billion in 2003 to 8.9 billion by 2050.

When the focus is removed from the global level, the nature of the population trends differ between the regions and countries of the world as a result of variation in their current and projected levels of fertility. For example, population growth in the developed regions (e.g. Europe, North America) is expected to decline at a rate of 0.14 per cent per year by 2050. Whereas, population growth in the less developed regions (e.g. Africa, Asia) is expected to remain positive throughout the next 50 years. Average fertility in almost all of the countries of the developed regions is currently below 2.1 children per woman, the level required to ensure that the population replaces itself, and is expected to remain so until 2050. For example, the average total fertility for the United Kingdom (UK) is currently 1.7 children per woman and is expected to remain so until 2050. In contrast, total fertility in the less developed regions is currently 3.1 children per woman and is expected to remain above replacement level in 2050. Therefore, whilst worldwide fertility is declining, until now the developed regions have experienced the most dramatic reductions.

Differences among the regions and countries of the world are also evident in life expectancy. For example, the developed regions have the lowest mortality rates and thus the highest levels of life expectancy, 75 years in 2000 increasing to 82 years by 2050. For the UK the current and projected life expectancy is 77 years increasing to 83 years. Less developed regions generally have higher mortality rates and therefore lower levels of life expectancy, 63 years in 2000 increasing to 73 years by 2050. Furthermore, the demographic impact of HIV/AIDS has also been felt. Developing countries with the lowest life expectancies are those with a high incidence of HIV infection (e.g. Sub-Saharan Africa). Despite higher mortality rates in these countries, in general the population of the less developed regions is living longer and is expected to double between 2000 and 2050 as a result of higher fertility levels.

The findings of the 2002 Revision (UN, 2003) of the world population prospects clearly demonstrate that societies in both the developed and less developed countries are experiencing declining fertility and increasing longevity. As a result, the world population is ageing.

1.1.2 Population ageing

Population ageing refers to a decline in the number of children and young people and an increase in the amount of people aged 60 years and above (WHO, 2002). The two main factors, which contribute to population ageing, are declining fertility and mortality rates. These factors work in tandem to alter the age structure or age composition of the population, that is, the proportionate numbers of children, young adults, middle-aged adults and older adults in a given population (Walker and Maltby, 1997; WHO, 2002). Declining fertility and increased longevity have lead to the world's population ageing significantly and it will continue to age.

Evidence of the changing age composition of the world is provided by the increase in the median age, that is the age that divides the population into two equal halves, and the increase in the old age dependency ratio, that is the ratio of the population aged 60 years and over to the population aged 15 to 60 years (UN, 2003). It should be

noted that the use of the phrase ‘dependency ratio’ is misleading because many people age 60 and above are not dependent as such, and continue to contribute both economically and personally to society. However, the ratio does serve as an indication of the changing age structure of the population. It is estimated that the global dependency ratio will more than double from 11 in 2000 (i.e. 11 people aged 60 years and over for every 100 people aged 15 to 60 years) to 25 in 2050. Furthermore, as Figure 1 shows, since 1960 the world median age increased by only 2.8 years to reach 26 years in 2000. However, in the next 50 years it is expected to increase by 10 to reach 36 years in 2050 (UN, 2003).

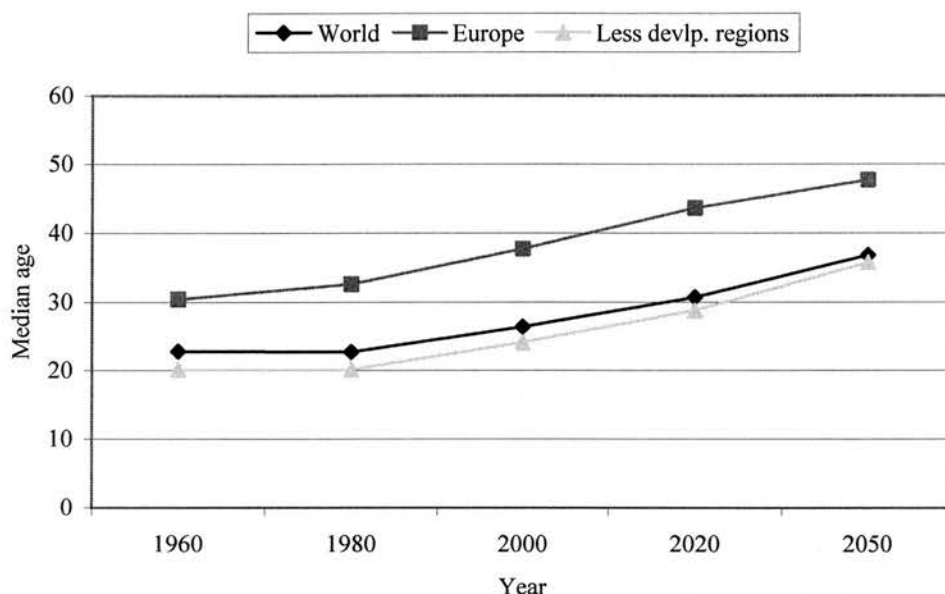


Figure 1. Median age by selected major area, 1960-2050 (source: UN, 2003)

Figure 1 also demonstrates that whilst the developed countries have aged first, over the next 50 years the less developed countries face significant population ageing. Worldwide, population ageing will result in a rapid increase in the number of people aged 60 years and above, increasing threefold from 606 million in 2000 to 1.9 billion in 2050. For the UK, the current and projected proportion of people aged 60 and above is 21 per cent rising to 30 per cent by 2050. In Highland region, where the present study took place, 16 per cent of the population are currently aged 65 and above, a figure which is expected to rise sharply to 24 per cent by the year 2016 (CMO, 2002; Census 2001).

It is the oldest old (people aged 80 years and above), that is the fastest growing section of the older population. Although, currently the oldest old account for only 1 per cent (69 million) of the worlds' population this will increase to 4 per cent (377 million) in 2050 (UN, 2003; WHO, 2002). In addition, because women live longer than men, they account for a higher proportion of older people in general, but especially of the oldest old. In the UK, for example the 'feminisation of ageing' (WHO, 2002; WHO, 1999) is reflected in the fact that in 2000 there were 9 000 centenarians but only 1 000 were male (UN, 2003). Women's longer life expectancy makes them more likely to suffer from the health problems (osteoporosis, diabetes, hypertension, and arthritis) commonly associated with old age (WHO, 1999). They are also more likely to become widowed making them more vulnerable to social isolation and loneliness. In addition, the prevalence of late life depression is higher in older women.

It is quite clear from the demographic data that the world is an ageing community. Whilst population ageing is an achievement it also represents a major challenge to societies worldwide. One of the main challenges of an ageing population is health particularly psychological health, which will be discussed below. Another challenge is ageism. Socio-cultural perceptions of old age can influence a person's attitude to their own ageing which in turn may influence their experience of late life and represent an obstacle to optimal ageing (Powell, 1998; Butler and Lewis, 1977).

1.2 Myths of ageing

Like all myths those about ageing will contain a kernel of truth which possibly increases their credibility, but they are also rooted in and perpetuated by ageism (Butler and Lewis, 1977). Butler (1969) coined the term ageism to describe the negative attitudes and practices that lead to discrimination against people because they are old. Unlike negative attitudes and stereotypes of race and gender, negative stereotypes of old age are still prevalent in societies (particularly Western cultures) (Levy and Banaji, 2002). This also applies to the provision of health services to older people, including psychological services (Woods, 2003). As a consequence of

ageism and the various myths of ageing, old age is portrayed as a period of life characterised by physical and mental deterioration (Butler and Lewis, 1977). For example, Powell (1998) and Laidlaw, Thompson, Dick-Siskin, and Gallagher-Thompson (2003) discuss several myths of ageing including, 'old dogs can't learn new tricks' (old people are unable to learn), 'to be old is to be sick' (older people are frail and in poor health), and 'old people are depressed and have every right to be' (ageing inevitably leads to depression and there are good reasons to be depressed in late life). It is important that myths about ageing are dispelled because they misrepresent the facts (Valliant and Mukamal, 2001). For example, in relation to the latter myth, although old age increases the likelihood of negative life events (e.g. shrinking social networks, loss of a spouse, declining health) the majority of older people cope well with these events and experience less depression than younger age groups (Blazer, 2003; Powell, 1998). The concept of successful ageing challenges the view of ageing as a period of decline. Valliant and Mukamal (2001) encourage the conceptualisation of ageing as a life stage with three dimensions, decline, neutral change, and development. Whilst decline is normally emphasised, less attention has been paid to the positive psychological changes which occur over the course of a life, for example, increased tolerance, patience, self-esteem and enhanced coping strategies all of which can contribute to optimal ageing and quality of life.

1.2.1 Negative self-perceptions of ageing

Negative self-perceptions of ageing may contribute to unsuccessful ageing. It has been suggested that the internalisation of ageist stereotypes such as those described above may have a negative influence on older people's self-perceptions of ageing, which in turn may have a psychological and physical outcome (Levy, Slade, Kunkel, and Kasl, 2002). Levy and colleagues (Levy and Banaji, 2002; Levy et al., 2002) suggest evidence of internalisation is provided by research that suggests ageing self-stereotypes can operate outwith older people's awareness. For example, Levy et al. (2002) describe a series of laboratory studies in which older people were exposed to negative or positive ageing subliminal primes (e.g. wise versus senile); those exposed to the negative primes showed a significant decline, compared to baseline, in a range

of cognitive and behavioural measures including memory, handwriting, mathematical performance and views of other older people. Levy and Banaji (2002) are less precise as to how the internalisation process occurs but suggest that the widespread and institutionalised acceptance of negative beliefs about older people facilitates the learning of such beliefs explicitly and implicitly throughout childhood and beyond.

The studies described above were carried out in the laboratory with all the control that this implies. However, some studies have reported the effect of self-perceptions of ageing in real world settings. Levy, et al. (2002) reported that older people with positive self-perceptions of ageing measured 23 years earlier lived significantly longer than those with less positive self-perceptions of ageing (median survival of those in the more positive self-perceptions of ageing group was 7.5 years longer than the median survival of those in the negative self-perceptions of ageing group). This was based on a reasonably large sample (n=660) and the advantage in longevity remained after age, gender, socio-economic status and health were included as covariates. Similarly, Maier and Smith (1999) found that self-perceptions of ageing emerged as a significant predictor of mortality in their analysis of data from the Berlin Ageing Study. Although, Maier and Smith (1999) suggest that negative views of own ageing are probably not the cause of increased mortality but possibly reflect other causes, for example health status. In another study, which followed up older people over ten years, negative views of ageing was found to be a significant predictor of depression and low self-esteem (Coleman, Aubin, Robinson, Ivani-Chalian, and Briggs, 1993). These authors hypothesised that the measure of negative attitudes to ageing reflected participants' fears about becoming dependent as they aged. The effect of negative self-perceptions of ageing in younger adults has also been demonstrated. A study of British and Australian nurses (n=364), found that nurses who attributed more negative attributes to older people on a semantic differential task (e.g. healthy-unhealthy) also held negative beliefs about their own ageing, the association was statistically significant (Gething, Fethney, McKee, Goff, Churchward, and Mathews, 2002). One of the aims of the current study is to examine

the relationship between self-perceptions of ageing and the understandability phenomenon.

As discussed above another challenge of an ageing population is mental health. Psychological health is essential for the maintenance of well-being, successful ageing and quality of life in old age. Late life depression is the prevailing cause of psychiatric morbidity in late life (Blazer, 2003).

1.3 Late life depression

1.3.1 Definitions of depression

The standard classifications of depression are those provided by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV; American Psychiatric Association, 1994) and the International Classification of Disease, Tenth Edition (ICD-10; World Health Organisation, 1992). The DSM-IV defines two depressive disorders, major depressive disorder and dysthymic disorder. Major depressive disorder is characterised by the presence of depressed mood, or loss of interest or pleasure in nearly all activities (anhedonia), accompanied by other depressive symptoms. These include appetite, weight, or sleep disturbance, psychomotor agitation or retardation, loss of energy, feelings of worthlessness or guilt, reduced concentration and recurrent thoughts of death or suicide. For a diagnosis of major depressive disorder, five or more of the symptoms must be present one of which must be depressed mood or anhedonia. The symptoms must be present most of the time for at least two weeks and must cause clinically significant distress or impairment in social or occupational functioning. Symptoms better accounted for by bereavement or the direct result of a substance (e.g. a drug of abuse or medication) or a medical condition (e.g. hypothyroidism) are excluded. Dysthymic disorder is characterised by milder but chronic symptoms. The diagnosis is made if symptoms persist for at least two years. As with major depressive disorder, dysthymic disorder must cause significant distress to social and occupational functioning. The ICD-10 contains very similar criteria to the DSM-IV. Depressive

episodes are diagnosed as mild, moderate or severe with moderate and severe equivalent to the DSM-IV category of major depression (Hammen, 1997).

1.3.2 The cognitive model of depression

The diagnostic criteria described above emphasise the importance of changes in mood (depressed mood) and motivation (anhedonia) as central features of depression. From a biological perspective these changes are considered to be the result of the dysregulation of neurotransmitters (e.g. norepinephrine and serotonin) at synaptic sites in the brain and serve as the rationale for treatment with antidepressant medication to regulate the availability of neurotransmitters (Hammen, 1997). In contrast, the cognitive model of depression emphasises the changes in a depressed person's thinking (Clark, Beck, and Alford, 1999).

One of the most frequently observed clinical phenomena of depression is negative thinking such as self-critical and hopeless thoughts (Blackburn and Twaddle, 1996; Beck, 1987; Beck, 1976). Beck (1987; 1976) proposed that depression is characterised by the negative cognitive triad, that is, thinking which reflects negative themes (interpretations, perceptions and expectations) about the self, the world and the future. The model proposes that the cognitive triad is the result of negative biases in information processing such as biases in the interpretation of events and information, for example, magnifying the negative at the expense of the positive (Blackburn and Twaddle, 1996). The cognitive triad and biased information processing are thought to be the products of underlying stable cognitive structures or schema (negative assumptions and beliefs relating to the self stored in long-term memory), which are acquired throughout development. In situations of stress that are similar to those involved in the development of the negative self-beliefs the schema is activated and colours the interpretation of events and information through biased information processing leading to thoughts of negativity and hopelessness and thus influences depressed mood (Blackburn and Moorhead, 2000; Hammen, 1997). For example, a belief that personal worth depends on success (e.g. 'I must succeed in everything I do') could lead to depression in the face of failure. However, various

contributors have criticised the model, for example, for ignoring environment and social factors, interpersonal processes; and furthermore the causal role of negative self-schema in the cognitive vulnerability to depression has been difficult to demonstrate (Hammen 1997; Engel and De Rubeis, 1993; Haaga, Dyck, and Ernst, 1991). Criticisms such as these have led to the development of cognitive theory and cognitive therapy of depression (see Blackburn and Moorhead, 2000 for a recent review of the cognitive theory of depression). Nevertheless, whilst recent formulations of the cognitive theory of depression may differ in emphasis they do not deny that negative thinking is a common characteristic of depression (Blackburn and Moorhead, 2000). Negative thinking is one of the most empirically supported elements of the cognitive model of depression (Engel and De Rubeis, 1993; Haaga, et al 1991). It is well established that depressed people think more negatively, and show increased hopelessness about themselves and their futures relative to other clinical groups and normal controls (Hammen, 1997; Engel and De Rubeis, 1993; Haaga et al 1991).

In other words the content of depressed cognitions (e.g. hopelessness) is specific to depression rather than other forms of disorder. One of the aims of the present study is to examine the relationship between depressive thinking specifically hopelessness, and the understandability phenomenon, as the understandability phenomenon could fit within the cognitive framework for late life depression as an age-related negative cognition.

There is evidence that depression may present itself differently in older people compared with younger people. It is unclear how well current diagnostic criteria reflect the experience of depression among older adults (Fiske, Kasl-Godley, and Gatz, 1998). Some contributors have suggested that depression may manifest differently in older people and that this may account for the difficulty in detecting the disorder (Gallo and Rabbins, 1999; Gallo, Anthony, and Methuen, 1994; Lebowitz, et al., 1997). Therefore, the use of the DSM criteria among older adults, which were first validated on younger age groups, has been questioned. Just as depression may manifest differently in children, for example, irritability and aggression may be the

main features, with depressed mood being less prominent (Carr, 1999), it has been suggested that the symptomatic expression of depression may differ between older and younger adults.

1.3.3 Symptom presentation in late life depression (How does depression differ in late life from depression in earlier life?)

In a large sample from the Epidemiological Catchment Area (ECA) survey, Gallo et al. (1994; see also Gallo, Rabins, Lyketsos, Tien, and Anthony, 1997, and Gallo, and Rabins, 1999) reported that older people (65 years and above) were less likely than younger people to describe their mood as depressed or acknowledge anhedonia (but more likely to endorse sleep disturbance and thoughts of death) even at the same level of depression, and accounting for factors such as, gender, educational level, and marital status. Gallo et al. (1997) found that “nondysphoric depression” (depression whose core symptoms do not include sadness or dysphoria) was as important as major depression in relation to long-term outcome. In a 13-year follow up of ECA data, compared with non-depressed controls people with “nondysphoric depression” were at increased risk of death, impairment of activities of daily living and functional disability. Underreporting of depressed mood has also been found among depressed elder in-patients (Lyness, Cox, Curry, Conwell, King, and Caine, 1995). However, these findings are not replicated consistently. Blazer, Bachar, and Hughes (1987) in a study of middle-aged and older patients with a diagnosis of major depression with melancholia found no difference in symptom presentation, and only a small majority of both younger and older medical in-patients with major depression, endorsed low mood on the Geriatric Depression Scale (Koenig, Cohen, Blazer, Krishnan, & Sibert, 1993). It should be noted that this study did not include older females who, according to Forsell, Jorm, and Winblad (1994), may be more likely to report mood symptoms.

Few studies have investigated gender differences in the symptomatology of late life depression. However, a recent study by Kockler and Heun (2002) compared individual symptoms between older men and women. They found that men and women with major depressive disorder did not differ in the number of symptoms, but

women suffered from significantly more appetite disturbance (reduced appetite) than men. Men, on the other hand, suffered more frequently from agitation than women. A recent qualitative study of depressed older women in-patients found that somatisation and functional disability were the most reported symptoms with sadness, feelings of guilt and hopelessness much less prominent (Ugarriza, 2002). However, this study had no comparison group of male depressives, few subjects (n=30), and all were recruited from the same in-patient ward.

Older people express lower levels of ideational symptoms such as guilt and suicidal ideation than younger depressed people (Gallo et al., 1994; Museti, Perugi, Soriani, Rossi, Cassano, and Akiskal, 1989; Small, Komanduri, Gitlin, Jarvik, 1986). Similarly, in a study of in-patients with depression aged 18 to 81 years, Wallace and Pfohl (1995) found that guilt and suicidal wishes as measured by the Beck Depression Inventory (BDI) and the Hamilton Rating Scale for Depression (HRSD) declined significantly with age for both men and women. Paradoxically, older people commit suicide at a much higher rate than any other age group, with the highest rate found among men over age 85 (Kinsella and Velkoff, 2000; Zarit and Zarit, 1998). Thus, although older people are more likely to complete acts of suicide they are less likely to voice suicidal ideation (Blank et al., 2001).

A comparison of consecutive younger and older patients from a mood disorders unit found that depressed older adults were more likely to have delusions, agitation, and marked loss of appetite than their younger depressed comparisons (Brodaty et al., 1991). In relation to somatic complaints, which are some of the most commonly reported depressive symptoms by older adults living in the community (Tylee and Katona, 1996), Blazer et al. (1987) found that compared with younger adults older adults with depression were more likely to experience weight loss and constipation. Museti et al. (1989) found that weight loss, psychomotor retardation and fatigue were more common in older persons. Somatic symptoms in both men and women, as indexed by the HRSD's measure of hypochondriasis, showed significant increases with age in Wallace and Pfohl's (1995) study. Sleep disturbance (e.g. early morning awakening, not feeling rested when waking, or trouble staying asleep) has been

significantly associated with depression in older adults (Salzman, 1997; Monjan and Foley, 1996), and older people who are depressed are more likely to endorse sleep disturbance compared with younger depressives (Gallo et al., 1994; Koenig et al., 1993). There are normal, age-related changes in sleep, for example, Hoch et al., (1997) in a longitudinal study demonstrated that continuity and depth of sleep decline over time in healthy older persons aged 75 to 87 years. Sleep disturbance is also a symptom of medical illness (Martin, Shochat, Ancoli-Israel, 2000). However, depressed older adults may experience more frequent and/or severe sleep difficulties (Karel, 1997), therefore, this symptom should not be dismissed merely as a normal part of ageing or the consequence of physical illness, but should be considered a possible sign of late life depression.

Several depressive symptom clusters or subtypes have been reported in older persons. Two distinct symptom clusters were identified by Newmann, Engel, and Jensen (1991a; 1991b) among older women living in the community. One characterised by guilt, self blame, and early morning wakening was described as a 'depressive syndrome', and the other, which was characterised by loss of interest, social withdrawal, loss of appetite and hopelessness was described as 'depletion syndrome'. The latter was proposed earlier by Fogel and Fretwell (1985) as a new subtype of depression found among older medically ill patients. A similar clustering of depressive symptoms was reported by Forsell et al. (1994). They identified a 'mood disturbance' and 'motivation disturbance' in people aged 75 years and above. Older men were more likely to have motivation disturbance (apathy, loss of motivation), while older women were likely to have mood symptoms, which as described above they readily reported.

Minor or subsyndromal depression refers to a pattern of depressive symptoms which do not satisfy the criteria for major depressive disorder. Although late life depression is not always classified as major depressive disorder, it is evident that depressive symptoms alone cause clinically significant distress and reduced social functioning (Lebowitz et al., 1997). Furthermore, support is growing for the notion that depression is a spectrum disorder, ranging from subsyndromal to major depression,

rather than a categorical disorder (Lavertsky and Kumar, 2003; Lebowitz et al., 1997). It has been suggested that subsyndromal depression (strongly associated with physical illness) may be typical of depressive presentations in late life (Ernst and Angst, 1995; Blazer, 1994). Fiske et al. (1998) suggest several other subtypes which may be relevant to late life depression because the specified symptoms overlap with those found in depressed older adults, for example, delusional, masked or somatic, and hopelessness depression.

To summarise these findings on the presentation of late life depression, there is some evidence that older adults may be less likely to report depressed mood, anhedonia, guilt and suicidal ideation, and more likely to report apathy, disturbed sleep and appetite, agitation, and somatic complaints. Using the example of depressed mood Rabins (1996) suggests two possibilities may account for the tendency of older adults to underreport depressive symptoms: one, older adults do not experience a sad mood with major depression, or two, older adults do not acknowledge or report sadness even though it is present. Gallo and colleagues (Gallo and Rabbin, 1999; Gallo et al., 1997; Gallo et al., 1994) favour the former hypothesis suggesting this may contribute to the underdetection and undertreatment of depression in late life. The latter hypothesis is pertinent to the present study. One possible reason for not reporting sadness, which has not been well studied in older adults, is that depression is believed to be normal and thus beyond the scope of intervention. Older people, it has been suggested, may misattribute their depressive symptoms to normal ageing and thus tend not to discuss them with health professionals (Blank et al., 2001). A discussion of this issue will be taken up below.

The findings on age-related differences in the presentation of depression also demonstrate the heterogeneity of late life depression. Research has indicated that there are multiple risk factors for depression in late life that may account for the different symptomatic presentations.

1.4 Aetiology of late life depression

Late life depression is a highly heterogeneous disorder which has been associated with a variety of psychological, social and biological processes. Vulnerability-stress models of psychopathology propose that individual vulnerability to depression and environmental stress are required to trigger a depressive episode (Hammen, 1998). Research has shown that this model can usefully be applied to understanding late life depression (Ormel, Oldehinkel, and Brilman, 2001; Zarit and Zarit, 1998; Karel, 1997), but may need to take account of the changing salience of stress-vulnerability factors in old age (Karel, 1997; see also Laidlaw, Thompson, Dick-Siskin, and Gallagher-Thompson, 2003 for a cognitive behavioural model for older people).

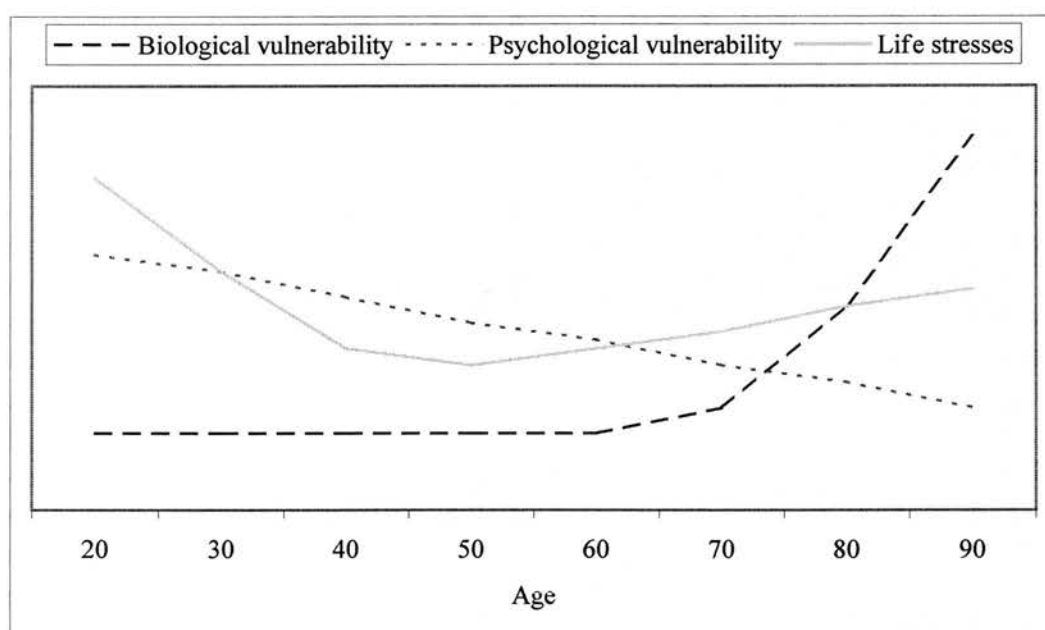


Figure 2. Changing influence of psychological and biological factors and stressful life events on depression throughout the life-span. Adapted from Karel (1997; p.855).

For example the ‘vascular depression’ hypothesis proposed by Alexopoulos and colleagues suggests that psychosocial factors may trigger depression in older people predisposed by vascular disturbance (Alexopoulos, Meyers, Campbell, Silbersweig, and Charlson, 1997). Based on a review of the literature, summarised in Figure 2,

Karel (1997) suggests there may be age differences in biological and psychosocial vulnerability to depression. As shown in Figure 2, over the course of late life (60 years and above) biological and medical factors become more pronounced as risk factors for depression in late life, psychological factors (e.g. coping strategies, self-concept) begin to exert less influence, and stressful life events increase in importance. As an example of how developmental change in vulnerability to depression may account for age differences in symptomatology, Karel (1997) suggests that symptoms such as guilt and self-blame may be less prevalent among older people because psychological vulnerability to depression (as shown in Figure 2) appears to decrease throughout late life. That is, older people may have developed more successful coping strategies and greater self-esteem that protects them against threats to their well-being (Bruce, 2002; Zarit and Zarit, 1998). The following discussions of psychosocial and biological risk factors are presented separately; however, it should be noted that psychosocial and biological processes do not operate independently. It is likely they interact in complex ways such that it is difficult to differentiate between causes and consequences of depression.

The following is not intended to be an exhaustive review of the biological and psychosocial factors associated with late life depression. Many of the factors will be discussed further in the sections below on the prevalence and impact of depression in late life.

1.4.1 Psychosocial risk factors

The association between psychosocial stress and the onset of depression is well established (Hammen, 1997). From a review mostly of longitudinal studies Bruce (2002) concludes that there are several significant psychosocial risk factors for late life depression, including life events and chronic stress, death of a spouse/loved one, medical illness, disability, and lack of social contact. These events have all been associated with depression in late life (Fiske et al., 1998), and some (activities of daily living and subjective social support) have been associated with the outcome of depression (Bosworth, Hays, George, Steffens, 2002). For example, a recent study by

Grace and O'Brien (2003) on the aetiology of late life depression found that during the year prior to the onset of depression, participants experienced significantly more life events (e.g. bereavement, health difficulties) and less social support (as measured by the presence of a confidante) than non-depressed controls. However, this was not found for participants, whose depression was of late onset, prompting the authors to suggest that there may be different aetiologies for late life depression. A discussion of this issue will be taken up in the section below.

Not everyone who experiences psychosocial risk factors becomes depressed. From a cognitive perspective the link between stressful events and depression is a function of the persons appraisal (or interpretation) of the event and its consequences (Beck, 1976). A predisposition to interpret events in a negative, or self-critical way may lead to depression. For example, as with other life events the onset of severe illness (e.g. stroke induced paralysis) will lead to disability and loss of activity, which may be interpreted by some older adults as meaning that they are 'finished' or 'useless'.

1.4.2 Biological risk factors

Krishnan's (2002) review of biological risk factors suggests there is some evidence for the role of genetic susceptibility, medical illnesses including vascular disease (hypertension, heart disease, stroke), and degenerative diseases (Alzheimer's and Parkinson's disease) in the onset of late life depression. A recent study by Oldehinkel and colleagues reported a strong effect of vascular risk factors (cerebro-ischaeamic changes) in the onset of depression not preceded by stressful life events and concluded that vascular risk factors probably represent an aetiology independent of psychosocial stress for some types of depression in late life (Oldehinkel, Ormel, Brilman, van den Berg, 2003). It has been proposed that depression occurring for the first time in late life (late onset depression) may be associated with a more organic aetiology than early onset depression, (recurrent depression from a first episode earlier in adulthood) (Lebowitz et al., 1997). Van den Berg and colleagues found that participants with late onset depression, which was not preceded by stressful life events, had significantly higher levels of vascular risk factors compared to those

whose depression was preceded by severe stress. In contrast, depression of early onset was associated with personality traits (e.g. neuroticism) and family history of depression. They proposed that late life depression may have three distinct aetiologies; early onset associated with longstanding vulnerability (psychological, genetic), and late onset depression in response to stressful life events or in response to cerebro-vascular lesions (vascular disease) (Van den Berg, Oldehinkel, Bouhuys, Brilman, Beekman, and Ormel, 2001).

The relationship between depression and cognitive impairment can be complex. Depression, particularly of late onset, may precede the onset of dementia and it has been suggested that both disorders may have a common biological pathway (Schweitzer, Tuckwell, O'Brien, and Ames, 2002). Depression can also occur in the early stages of an established dementing illness (Mulsant and Ganguli, 1999), which due to the symptom overlap between the disorders (apathy, poor concentration, poor appetite, and sleep disturbance) can make diagnosis of depression difficult.

As shown in Figure 2, biological and medical factors become increasingly associated with depression as people age. Depression with a more organic aetiology may account for the reports, noted earlier, of the prevalence of symptoms such as apathy, lack of motivation and loss of interest compared with low mood (Karel, 1997). However, Figure 2 also shows that stressful life events (e.g. bereavement, disability, reduced social network) become increasingly associated with depression as people age, therefore, it is likely that both psychosocial and biological factors contribute to the risk of depression in late life.

Many of the factors described above (biological and psychosocial) are not inevitable consequences of late life, but they are increasingly likely as adults age. However, very often it is assumed by the general public and many health professionals that old age is a time of loss and decline and that depression is an understandable reaction to such losses (Henderson, Jorm, Korten, Jacomb, Christensen, and Rodgers 1998; Powell, 1998). Whilst, as will be discussed below, depression is the most common

mental health problem among older adults it is not more common than in younger age groups (Blazer, 2003).

1.5 Prevalence of late life depression

The reported prevalence rates of late life depression differ significantly depending on the definition of depression and the population studied. Studies using DSM criteria generally report lower rates of depressive disorders in older adults, whereas those measuring depressive symptoms have reported high prevalence rates in late life. Specific populations such as medical/surgical patients, and nursing home residents generally have higher prevalence rates than the community population at large.

1.5.1 A note on the comorbidity of depression and anxiety disorders in late life

Although this thesis focuses on depression the reader should be aware that anxiety is also an important problem among older people which frequently coexists with depression in late life (Devanand, 2002). A recent large community based study found 47.5 per cent of those who were depressed had a concurrent anxiety disorder (Beekman, et al., 2000). Comorbidity was also highly prevalent in a mixed sample of depressed psychiatric and primary care patients, 23 per cent met criteria for current anxiety disorder (Lenze, Mulsant, Shear, Alexopoulos, Frank, and Reynolds, 2001). Comorbid late life depression and anxiety (as a symptom and a disorder) has been associated with greater severity of psychological distress and poorer treatment response than non-anxious depression in older people (Devanand, 2002). For example, compared with older depressed adults without anxiety, older adults with comorbid anxiety experience more severe somatic symptoms, poorer social functioning, and increased suicidal ideation when comorbid with generalised anxiety disorder (GAD) (Lenze, et al., 2001). However, Devanand (2002) cautions that due to the lack of longitudinal studies limited conclusions can be made as to the impact of anxiety on the severity and treatment of late life depression. In relation to the current study Lenze et al. (2001) suggest that anxiety disorders can be difficult to

diagnose in older adults because depressed older people may misattribute somatic symptoms to physical illness and hence may be less likely to report them.

1.5.2 Prevalence of depression in community samples

The prevalence estimates of major depression in community samples have been relatively low, ranging from 1 per cent to 4 per cent, with higher prevalence among women (Beekman, Copeland, and Prince, 1999; Blazer, Hughes, and George, 1987; Copeland, Dewey, Wood, Searle, Davidson, and McWilliam, 1987). In America, overall prevalence in the ECA surveys for people aged 65 and above was 0.7 per cent for major depression, and 1.8 per cent for dysthymic disorder (Weismann et al., 1988). In contrast, people aged 25 to 44 years had a prevalence of major depression of 3 per cent, and people aged 45 to 64 years had a prevalence of 2 per cent. However, the prevalence rates for those aged 65 and above may have been artificially low due to the under-representation of physically ill participants (Laidlaw, 2001). In the UK, community prevalence has been estimated at 2.9 per cent for major depression and 8.3 per cent for minor depression (Copeland et al., 1987).

Estimates of the community prevalence of clinically significant depressive symptoms among older adults are much higher ranging approximately from 8 or 9 to 16.9 per cent (Blazer, 2003; Fiske et al., 1998). Depressive symptoms are measured using symptom checklists such as the Geriatric Depression Scale (Yesavage et al., 1983). Scores relating to the presence or severity of an individual symptom are summed to provide an overall rating of depressive symptomatology. Fisk et al. (1998) suggest that a more complete picture of distress is provided using this approach because unlike categorical diagnostic systems, no symptoms are excluded due to their origin (e.g. physical illness or bereavement). This approach is also in tune with the notion, discussed earlier, of depression being better conceptualised as a spectrum rather than a categorical disorder. In the UK, Lindesay, Briggs, and Murphy (1989) reported a community prevalence of 13.5 per cent for clinically significant symptoms and a similar estimate of 14.7 per cent was reported in an American study (Blazer and Williams, 1980). A recent study of community-dwelling oldest old (aged 80 years

and above) reported an estimate of 12 per cent for depressive symptoms (Xavier, Ferraza, Argimon, Trentini, Poyares, Bertollucci, Bisol, and Moriguchi, 2002). Those who were depressed were more likely to complain of sleep disturbance and memory problems.

In primary care populations depressive symptoms and major depression may be higher than the community population at large. Schulberg, Mulsant, Schulz, Rollman, Houck, and Reynolds, (1992) reported estimates of 20 per cent, for depressive symptoms and 10 per cent for major depression in older primary care patients. A study by Lyness, Caine, King, Conwell, Duberstein, and Cox, (2002) reported similar prevalence rates for depression, however, more than half (57 per cent) of the participants still had a diagnosis of depression at one-year follow-up.

The findings of a recent systematic review of community based studies can help summarise the current state of knowledge in relation to the community prevalence of late life depression. Beekman et al. (1999) reviewed 34 studies carried out between the years 1956 to 1996. They found that major depression was a relatively rare disorder among older people, with an average prevalence rate of 1.8 per cent. The average prevalence for minor depression was 10.2 per cent, and the average prevalence of clinically significant depression symptoms was 13.5 per cent. They concluded that older adults have relatively low rates of major depression but report relatively high rates of clinically significant depressive symptoms (subsyndromal depression) that do not meet criteria for major depression. Furthermore, there was consistent evidence for higher prevalence rates of depression in women and in older persons living under poor socio-economic conditions.

1.5.3 Incidence of depression in community samples

Since prevalence is affected not only by the occurrence of new cases but also by the duration of the disorder and by its mortality, Palsson and Skoog (1997) suggest that incidence (i.e. new cases over a year) is a better measure of risk. Studies reporting the incidence of late life depression are rare therefore this section is necessarily brief.

In the UK, Copeland et al. (1992) reported an incidence for depression of 2.4 per 100 person-years (or 24 per 1000 of the population per year), and Blanchard, Waterreus, and Mann (1994) in their inner London study reported incidence rates of 1.5 per 100 person-years for diagnostic depression and 31 per 100 person-years for 'probable pervasive depression' (clinically significant depression). Blanchard et al. (1994) suggest the discrepancy between the UK incidence rates is a result of a delay in their study between screening and diagnostic interview. They suggested that the delay allowed some subjects to improve. In the US, the estimate of incidence for depression in older adults from the ECA surveys was 1.3 per 100 person-years, which was similar to the rate in younger age groups (Eaton, Kramer, Anthony, Dryman, Shapiro, and Locke 1989) and similar to the findings of Blanchard et al. (1994).

1.5.4 Depression and comorbid medical illness

The prevalence of depression among older adults requiring acute medical or surgical care is high. Ten to twelve per cent have been estimated to have major depression and a further 23 per cent have significant depressive symptoms (Koenig, Meador, Cohen, and Blazer, 1988). Parkinson's Disease (PD) and Alzheimer's Disease (AD) are associated with depression. It has been estimated that approximately half of the patients with a degenerative disease such as PD and AD have depressive symptoms. The prevalence of major depression in PD is 20 per cent (Krishnan, 2002), and in AD it has been estimated at 22 per cent with an additional 27 per cent estimated to have minor depression (Lyketsos et al., 1997). As noted earlier with AD, the presence of depression in PD complicates diagnosis and treatment of this condition and often depression may be left untreated (Poewe and Luginger, 1999). Depression is prevalent in cardiovascular disease. One study estimated that 18 per cent of patients post myocardial infarction (MI) met criteria for major depression and 27 per cent had minor depression (Schleifer 1989). Depression has been described as the most common neuropsychiatric consequence of stroke (Robinson, 1997). Prevalence rates vary enormously from 25 to 79 per cent (Gordon and Hibbard, 1997). In common with previous studies on the prevalence of depression this variation is attributable to

methodological differences between studies, such as, the timing of assessment relative to the onset of stroke and the assessment criteria used to identify depression (Kneebone and Dunmore, 2000).

1.5.5 Prevalence of depression in long-term care

Finally, the prevalence of depression amongst older people in long-term care (e.g. nursing home residents) has ranged widely but overall high rates of depressive disorders and clinically significant symptoms have been reported. Some studies have reported estimates of ranging from 8.9 to 25 per cent (Masand, 1995; Rovner, German, Brant, Clark, Burton, and Folstein 1991), in others, prevalence rates of 12.4 per cent have been reported for major depression with another 35 per cent experiencing significant depressive symptoms (Parmalee, Katz, and Lawton, 1989). Depression in nursing home populations has also been associated with an increased risk of mortality (Rovner et al. 1991). A recent longitudinal study of residents in long-term care with dementia found that the prevalence of depression was highest on admission (19.9 per cent), and then declined over the course of the following year to 6.0 per cent at six months and 4.5 per cent at twelve months (Payne et al., 2002). These authors also calculated the incidence of depression in those who had no previous history, and who were not depressed at admission. The incidence of depression at six months was 1.8 per cent and the annual incidence was 6.4 per cent. The finding of a reduction in depression over the year was hypothesised to be a consequence of rapid identification and treatment of depression, which was readily available at the nursing home. This is an unusual finding as recognition and treatment of depression in long-term care (and in the wider community) has been found to be consistently poor across studies (Blazer, 2003).

To summarise the findings on the prevalence of late life depression, in general major depressive disorder has a relatively low prevalence in late life affecting only a minority of older people, and less than those affected in younger age groups. In contrast, rates of clinically significant depressive symptoms are considerably higher than the rates of major depression among older people. As described above

significant depressive symptoms represent a major cause of emotional suffering and disability in older people. Specific populations, such as those with physical illness (medical/surgical patients, degenerative illnesses, stroke), and nursing home residents, are at highest risk of depression in late life. The epidemiological findings provide some support for the argument that depression is the leading cause of psychological distress in late life. The consequences of depression for older people are significant and will be discussed below.

1.6 The impact of late life depression

Depression has been shown to increase the burden of medical illness and functional disability. It has also been associated with increased risk of mortality both by suicide and by natural causes. Late life depression is also more likely to exhibit a chronic course than depression in younger people, and add significantly to health care costs through increased health service utilisation.

1.6.1 Depression and disability

Depressed older adults often have comorbid conditions such as heart disease, diabetes, arthritis, and stroke. The presence of depression can adversely affect the course and outcome of such physical illnesses. Depression is prevalent in older adults recovering from stroke, myocardial infarction (MI), Parkinson's Disease (PD) and hip fractures, and has been shown to interfere with the process of rehabilitation, and lead to increased disability, poorer prognosis, diminished quality of life and death (Blazer 2003; Montano, 1999; Katz, 1996). Disability refers to the functional problems associated with performing the activities of daily living such as self care (personal cleansing, dressing), eating and drinking, and expressing sexuality, but also refers to problems performing social roles, maintaining relationships, and participating in society (Alexopoulos, Buckwalter, Olin, Martinez, Wainscott, and Krishnan, 2002). Gallo et al.'s (1997) study, described above, demonstrated that depression may affect functional ability over time. They found depression increased the risk of impairment of activities of daily living and cognitive impairment over 13 years. They also found that non-dysphoric depression was associated with an

increased risk of death. A recent study examining disability in patients with Chronic Obstructive Pulmonary Disease (COPD) found that patients with comorbid depression (including sub-threshold depression) had levels of disability and impaired quality of life significantly greater than those with no depressive symptoms (Yohannes, Baldwin, and Connolly, 2003). In another recent study, serious physical illness (visual impairment, neurological disorders, and malignant disease) in the presence of depression was significantly associated with suicide in older people (65 years and above), particularly older men (Waern, Rubenowitz, Runeson, Skoog, Wilhelmson, and Allebeck, 2002). Depression appears also to amplify the effects of pain associated with medical problems (Katz, 1996). Compared with non-depressed older institutionalised patients, depressed patients report more frequent and more severe pain (Parmalee, Katz, and Lawton, 1991). Furthermore, treatment of depression has been shown to alleviate chronic pain, highlighting the need for accurate diagnosis and treatment of late life depression (Montano, 1999).

1.6.2 Depression and non-suicidal mortality

As well as being a risk factor and consequence of medical illness and disability, research suggests that depression may also be a risk factor for mortality in older people. Depressed older adults have an increased risk of dying compared to the general population and the cause of death is often a cardiovascular disorder (Palsson and Skoog, 1996), stroke or cancer (Montano, 1999). Burvill and Hall (1994) compared the mortality rate of a group of mostly depressed older in-patients with the expected mortality rate in Perth, Australia. Mortality among the depressed group was greater than the general population of similar age and sex, with men at greatest risk of death. The majority of deaths were the result of cardiovascular, malignancy and respiratory disease; impaired mobility measured at baseline was the best predictor of mortality. In a large community sample from the Longitudinal Aging Study Amsterdam, major depression in both men and women, and minor depression in men only, significantly increased the risk of dying compared to non-depressed comparisons during 50 months follow-up (Penninx, Geerlings, Deeg, van Eijk, Tilburg and Beekman, 1999). The risk of death was statistically significant even after

controlling for socio-demographic and health variables. In line with the findings of Burvil and Hall (1994) depression was strongly associated with cardiovascular and respiratory death than for other causes (e.g. diabetes). In a recent systematic review of the literature (61 papers between 1997-2001) of late life depression and non-suicide mortality, Schulz, Drayer, and Rollman, (2002) found that the majority of studies (72 per cent) demonstrated a positive association between late life depression and mortality. The effect was stronger among men than women, and there was a strong relationship between depression and cardiovascular disease. Schulz et al. (2002) suggest that the evidence supporting an association between depression and mortality is so strong that research effort should now turn to elucidating possible mechanisms that might account for the relationship.

1.6.3 Depression and suicide

In most countries in Europe and in the US the rate of completed suicide in older people is significantly higher than in younger age groups (Kinsella and Velkoff, 2000). In 1998, the overall US suicide rate was 11.3/100 000, whereas the rate among older adults was 16.9/100 000 (Conwell, Duberstein, and Caine, 2002). Studies have shown that widowed (or single) marital status, men 75 years and older, depression, and physical illness are risk factors for suicide in older people (Conwell, et al., 2002; Waern, et al., 2002; Szanto, Prigerson, and Reynolds, 2001; Harwood, Hawton, Hope, and Jacoby, 2000; Hepple and Quinton, 1997). Older suicide attempters are also more likely to live alone, perceive their health as poor, experience stressful life events (especially loss, family discord), and have poor social support (Conwell, et al., 2002). While the number of suicide attempts is lower among older adults than in younger groups, suicide attempts by older people are more likely to prove fatal (Hepple and Quinton, 1997). Another risk factor for late life suicide may be hopelessness. Hopelessness refers to negative expectancies and attitudes about the future (Beck, Weisman, Lester, and Trexler, 1974) and it has been associated with suicide and suicidal behaviour in adults (Beck, Brown, Berchick, Stewart, and Steer, 1999), and older adults (Szanto, Reynolds, Conwell, Begley, & Houck, 1998; Rifai, George, Stack, Mann, and Reynolds, 1994). It has also been suggested that high

levels of hopelessness may lead to non-compliance with treatment and further suicide attempts in older adults (Pearson and Brown, 2000; Rifai, et al., 1994). Non-compliant behaviour (e.g. refusing to eat and drink and refusing medication), which can lead to premature death, may represent a subtle form of suicide. These behaviours are most prevalent in situations (e.g. nursing homes) where access to more violent means of suicide are limited (Szanto et al., 2001).

Evidence from the majority of studies suggest that depression (categorical disorder or symptomatology) is the predominant psychopathology associated with late life suicide (Blazer, 2003; Conwell et al., 2002). Yet depression and suicidal ideation in late life are often underdetected. Harwood et al. (2000) reported that 50 per cent of suicide victims aged 60 years and older had seen their GP in the month before death, 26 per cent in the week before death, and 7 per cent within 24 hours of death, however, over half of the visits were for physical complaints. This highlights the difficulty GPs may have in identifying among older people those at risk of depression and suicide. Many of these deaths may have been prevented if depression or suicidal ideation had been detected. One of the factors that complicate the detection of depression and those at risk of suicide in late life is the tendency of older people not to report depressive symptoms or suicidal ideation (Blank et al., 2001; Gallo et al., 1994), either by downplaying their significance or by considering them a normal consequence of ageing.

1.6.4 Chronicity of depression

Studies examining the persistence of late life depression have reported that approximately 40 to 50 per cent of those depressed at baseline are depressed at follow-up (Beekman, Deeg, Geerlings, Schoevers, Smit, and van Tilburg, 2001; Beekman, Deeg, Smit, and van Tilburg, 1995; Copeland, et al., 1992; *duration of follow-up 1 to 3 years*). Penninx, Deeg, van Eijk, Beekman, and Guralnik, (2000) found that chronic depression was associated with significantly greater decline in physical function (walking, dressing, using public transport) over 3 years compared to non depressed comparisons. Penninx et al. (2000) also found that physical

function in participants with remitted depression was comparable with that of non-depressed participants. This finding suggests that early diagnosis and treatment of late life depression may prevent physical decline. Other longitudinal studies described above have demonstrated the outcome of chronic depression in relation to functional disability (Gallo et al., 1997), increased mortality (Penninx et al., 1999), and persistence of depression in primary care (Lyness et al., 2002). Bosworth et al. (2002) found that only 45 per cent of their sample was in remission one year after being diagnosed with depression despite high levels of treatment with antidepressant medication. Older adults without comorbid physical illness or cognitive impairment are less likely to experience chronic depression, whereas persistence is predicted by poor social support, poor self-perception of health (Blazer, 2003) and chronic physical illness (Beekman et al., 2001).

1.6.5 Depression and health service use (economic impact)

In addition to the personal consequences, late life depression also has an economic impact. Depression in old age leads to increased use of hospital and outpatient services, longer hospital admissions, and increased amounts of nursing care for nursing home residents (Blazer, 2003; Unutzer et al., 1997; Katz, 1996). Koenig and Kuchibhatla (1999) followed-up depressed and non-depressed older people following discharge from hospital and found that depressed older adults saw a primary care physician more often and had higher rates of hospital re-admission than non-depressed comparisons. In primary care, depression among older people has been associated with increased contact with GP's, medication use, and outpatient appointments (Salzman, 1997). Unutzer et al. (1997) found that the increased cost incurred by depressed older people in a primary care setting was associated with an increase in general medical services and not solely increased psychiatric care. One explanation for the increased utilisation of health services is that depression as a comorbidity can amplify the symptoms and associated disability of age-related medical problems

The findings on the impact of late life depression suggest that recognition and treatment of depression in late life may be protective for subsequent physical decline and premature death by both natural causes and suicide.

1.7 Treatment of late life depression

In recent reviews both psychotherapy and pharmacological interventions and combined treatments (antidepressant medication and psychotherapy) have been shown to be effective in treating late life depression (Laidlaw, 2001; Karel and Hinrichsen, 2000; Gerson, Belin, Kaufman, Mintz, and Jarvik, 1999)

1.7.1 Physical treatments (medication and electro-convulsive therapy, ECT)

Tricyclic antidepressants (TCAs, e.g. amitriptyline), serotonin re-uptake inhibitors (SSRIs, e.g. fluoxetine) and other drugs (e.g. monoamine-oxidase inhibitors) have been shown to be effective treatments for late life depression (Mittman et al., 1997). In repeated studies antidepressant drugs have been found to be significantly superior over placebo (Gerson et al., 1999). However, both Gerson et al.'s (1999) and Mittman et al.'s (1997) meta-analyses found no significant difference between the different drugs in terms of treatment response or tolerability, suggesting that there is insufficient evidence to recommend one type of antidepressant over another for the treatment of late life depression. An important consideration with older adults is that adverse drug reactions (cardiac arrhythmias, hypotension, anticholinergic and extrapyramidal effects) increase with age (Pollock, 1999; Gerson et al., 1999). Side effects of all types are 7 times more frequent in those aged 70 to 79 years than those aged 20 to 29 years (Pollock, 1999) and contribute to non-compliance and treatment drop out (Pollock, 1999; Gerson et al., 1999). Furthermore, in older people with comorbid physical illness requiring high levels of medication use, antidepressant treatment can be contraindicated due to the risk of drug interactions (Pollock, 1999). Treatment with ECT has also been shown to be effective for depression in late life (Fiske et al., 1998). It is not normally viewed as a first line treatment but is regarded as an important option in severe depression when there is particular urgency (e.g.

when a person has stopped eating and drinking) or when medication has not been effective (Hammen, 1998). However, cognitive side-effects (e.g. confusion, amnesia) are common and due to the need for general anaesthesia older people with cardiac problems are at risk of cardio-vascular complications (Fiske et al., 1998).

1.7.2 Psychotherapeutic treatment of late life depression

In a recent review of both meta-analyses and individual and group outcome research, Laidlaw (2001) concluded that cognitive-behavioural therapy has been shown to be an effective treatment for late life depression. Similarly, Karel and Hinrichsen (2000) concluded from their review of various psychological interventions (CBT, interpersonal psychotherapy IPT, life review, psychodynamic therapy and family interventions) that CBT and to a lesser extent IPT have the most empirical support as effective psychological treatments for late life depression. It has been suggested that IPT may be a particularly useful therapy for older people given the number of potential social and interpersonal stressors (e.g. bereavement, isolation, role change), which may occur in late life (Karel and Hinrichsen, 2000). Although, Karel and Hinrichsen caution that further studies of IPT are required as it has not been extensively evaluated in the treatment of late life depression. Equally, it has been suggested that the focussed, structured, and skills enhancing nature of CBT make it particularly relevant to older people as current needs are met 'here and now', the person is taught how to manage their depression and interventions are developed to challenge stereotyped beliefs such as 'old people are depressed and have every right to be' (Laidlaw, Thompson, Dick-Siskin, and Gallagher-Thompson, 2003; Laidlaw 2001; Morris and Morris, 1991).

Karel and Hinrichsen (2000) note that many of the studies reviewed involved relatively healthy, community dwelling, young-old people (in their 60's and 70's) and therefore there is a need for studies involving people aged 80 years and above, people with comorbid medical problems, and people in long-term care. It has also been suggested that there has not been enough research with large enough samples to allow firm conclusions about the differential effectiveness of various psychological

approaches (Laidlaw, et al., 2003; Laidlaw, 2001). Nevertheless, the available research findings indicate that psychotherapy is at least as effective as medication, and that psychotherapy combined with antidepressant medication is superior to either treatment alone (Laidlaw et al., 2003; Laidlaw, in press). For example, a recent randomised controlled trial in a UK primary care setting (not included in the above review studies) of CBT versus treatment as usual (pharmacotherapy) for late life depression found that participants in both treatment conditions demonstrated significant reductions in depressive symptoms at the end of treatment and at six months follow-up compared with baseline measures (Laidlaw, et al., In preparation). The findings on the psychological treatment of late life depression suggest that psychotherapy represents a viable treatment alternative to pharmacotherapy which is important given the potential problems older adults can experience in relation to medication. However, as described below depressed older people are seldom referred for psychological treatment.

1.7.3 The under-detection and under-treatment of late life depression

It is clear that depression is a potentially modifiable condition, but unfortunately it is often unrecognised and untreated in older people. For example, in a large community sample of older people approximately half with self-reported feelings of depression (GDS > 11) were not detected as depressed (based on health records) by primary care staff (Garrard, et al., 1998). Garrard et al. (1998) also reported that men were at highest risk of under-detection. Similarly, Crawford (1998) reported that GP's were aware of depression in just over half of their older patients (65 years and above), the least likely to be identified were men living alone, those with least education, and those with visual impairment. Community nursing staff correctly identified only 45 per cent of older patients who had been independently diagnosed as depressed (Brown, McAvay, Raue, Moses, and Bruce, 2003). GP's in Finland identified depressive symptoms in only 42 per cent of older people (70 years and above) who had reached caseness on the Zung self-rating scale for depression (Arve, Lauri, Lehtonen, and Tilvis, 1999). Even when depression is diagnosed older people may still not receive treatment (McDonald 1986). GP's are often reluctant to prescribe

antidepressants to older people because of the increased risk of side effects and drug interactions, and older people are often not referred for psychological treatment on the basis of the erroneous belief that they are too old to change their attitudes or behaviour (Katona, 2000; McDonald 1986).

These findings highlight the need to better understand possible barriers to the diagnosis and treatment of late life depression. As described earlier a number of reasons for the under-detection and under-treatment of late life depression have been proposed, including depressed older adults may be less likely to endorse 'cardinal' symptoms of depression (Gallo, et al., 1994), depression may present differently in older adults for example, depressed older adults may not always satisfy the DSM IV criteria or they may have a more organic presentation such as vascular depression (Lebowitz et al., 1997; Alexopoulos et al., 1997), depressive symptoms may overlap with the symptoms of coexisting physical or psychiatric illness making diagnosis difficult, and lastly older adults may hold beliefs, such as the understandability phenomenon, which reduce the likelihood of the recognition and diagnosis of depression.

1.8 The understandability phenomenon

The 'understandability phenomenon' was coined by Blanchard (1992) to refer to the difficulty detecting and managing depression in older people. According to Blanchard (1992) patients and their relatives may assume depressive symptoms are a normal consequence of ageing and that there is little their GP can do about them. In turn, GP's may fail to recognise depression as a treatable illness in the context of prominent somatic symptoms and other problems (e.g. poverty). Therefore, both patient and doctor are blighted by the belief that depression is understandable and beyond the scope of intervention. Blanchard (1992) states,

"Because of cultural stereotypes the symptoms...may be seen as part of the natural ageing process...and they (older people) may consider that 'there is nothing that can be done'...In both patient and doctor the

‘understandability’ phenomenon may occur. This is when syndromal illness is dismissed because management of an assumed aetiology is outside the power of the health carer” (p252-3).

Cole, Christensen, Raju, and Feldman (1997) called the same phenomenon the “fallacy of good reasons”, suggesting that older people and health professionals may both mistakenly believe that there are good reasons for depression in late life, that is, because the person is old and physically ill, it is no surprise he/she is depressed, and there is little point in trying to change this. As Table 1 below shows, the notion that older adults may believe late life depression is understandable or normal has been referred to frequently in the literature. Laidlaw, Law and Salter (unpublished data) also found evidence of such beliefs in a series of focus group discussions (n=70) on older adults’ (65 years and above) understandings of depression. The themes emerged in older peoples aetiological explanations for the development of depression in later life. Common themes from this work were similar to those described in the literature above and included,

- it is more natural for older people to be depressed,
- being old is regarded as being depressed, and
- doctors think there is less that can be done.

In addition, a surprise finding which emerged from the discussion groups were themes of an *intergenerational negative bias* in relation to depression. For example, themes such as,

- young people have no reason to be depressed, and
- surprised when hear about younger people being depressed.

It was hypothesised that such intergenerational negative biases may be the understandability phenomenon in reverse because they seem to suggestion that only older people should be depressed, or that only older people have a ‘reason’ to be depressed, i.e. depression is understandable in older people but not in younger people. A summary of the findings is provided in appendix 1. Although anecdotal, the researcher has also occasionally observed depression described as a consequence of old age in his clinical work with older people.

Table 1. References to the understandability phenomenon in relation to depression and suicidal ideation in older adults.

Authors	Comment
Lebowitz et al. (1997; p3)	"Because of the many physical illnesses and social and economic problems of the elderly, individual health care professions often conclude that depression is a normal consequence of these problems, an attitude often shared by patients."
Fiske et al. (1998; p217)	"Reasons suggested for failure to recognise depression include...older adults attribution of the symptoms to normal ageing."
Unutzer, et al. (1999; p234)	"...older adults and their physicians may misattribute symptoms of major depression to 'normal' ageing, physical illness, or grief...and this may lead to therapeutic nihilism."
Pearson & Brown (2000; p686)	"Many health providers, family members, and older adults themselves, report that depression and suicidal ideation are a part of the ageing process."
Karel & Hinrichsen (2000; p708)	"Older adults and those who know them may assume that poor energy, loss of interest, and somatic symptoms are simply a part of being old or sick."
Wattis (2000; p473)	"Old people are perhaps expected to be miserable and, if their mental pain occurs in the context of physical illness and/or social deprivation, it may be regarded as secondary and not worthy of medical treatment."
Katona (2000; p427)	"It is commonly believed that depression is a legitimate consequence of growing old, and that an elderly person should expect to feel more miserable as a result of being less fit and less able to get out and about, and having more deaths in their immediate circle of friends. As a result of this misconception elderly patients may not mention their symptoms to the doctor, which can hinder diagnosis."
Laidlaw (2001; p2)	"The 'understandability phenomenon' or the 'fallacy of good reasons' is the notion that depression in older people is in some way to be expected and is a normal part of ageing. Assumptions such as these can influence expectations of client, therapist and physician alike resulting in a sense of hopelessness about treatment."
Blank et al. (2001; p32)	"Cultural norms and cohort effects contribute to patients' difficulties in discussing depression and suicidal ideation. Ageist misconceptions exist among the elderly...and can result in them misattributing their depressive symptoms to 'normal' ageing, physical illness, or to what they fear as inevitable decline."
Sonneberg et al. (2003; p99)	"...depression is sometimes looked upon as a normal reaction to stress (losses, physical decline) or to getting older, and thus not in need of specific treatment."

The researcher, however, has been unable to locate any empirical investigations of this phenomenon in older adults. In contrast, the practices, knowledge and attitudes of health professions (e.g. GP's) in relation to late life depression have been examined (Rothera, Jones, and Gordon, 2002; Gallo, Ryan, and Ford, 1999; Glasser and Gravdal, 1997; Rapp and Davis, 1989).

In general, the findings of this research have been mixed. Rothera et al. (2002) found that apart from those without psychiatric training most GP's (67.5 per cent of 235 respondents) were confident in treating late life depression and the majority did not believe that it was a natural consequence of ageing (85.4 per cent) or that the majority of older people are depressed (74.5 per cent). In contrast, Gallo et al. (1999) and to a lesser extent Glasser and Gravdal (1997) found respectively 77 per cent (out of 215 respondents) and 58 per cent (out of 141 respondents) of physicians in their studies believed depression was understandable given the losses of late life. A sizeable minority (12 per cent) of the physicians in Glasser and Gravdal's (1997) survey also believed depression was a natural aspect of the ageing process. Few physicians referred to specialist mental health services (Gallo et al., 1999), and there was little standardised screening for depression among older adults (Glasser and Gravdal, 1997; Rapp and Davis, 1989). In general, the main treatment offered was SSRI's.

Given the lack of research specifically on older adults' attitudes toward depression in late life, this study will examine the understandability phenomenon solely from the standpoint of older people.

It is evident from the relevant literature (see Table 1 for examples), the definitions provided by Blanchard (1992) and Cole et al. (1997), and the findings of the focus groups (Laidlaw et al., unpublished results) that there are three elements to what has been described as the understandability phenomenon. These are,

- depression is a normal part of old age,

- there are good reasons for depression in late life (economic, social, physical illness), and
- there is little if anything that can be done to help

These ingredients can be brought together and paraphrased in the following way, *it is natural to be depressed in late life because there are good reasons for it, therefore, there is no point in treatment*. The current study used the above conceptualisation of the understandability phenomenon as the basis on which to examine whether older people believe depression is a normal consequence of old age.

1.9 Research aim, questions and hypotheses

1.9.1 Research aim

The understandability phenomenon is frequently referred to in the literature and appears to have achieved a level of general acceptance and validity. However, there is a lack of empirical evidence supporting the existence of this concept and a lack of information about the correlates, if any, of the phenomenon. Therefore, the main aim of this study is to describe attitudes regarding the understandability of depression in a sample of community dwelling older adults. A secondary aim is to determine whether clinical, cognitive, and demographic variables are related to the phenomenon.

1.9.2 Research questions and hypotheses

Do older adults believe depression is a normal consequence of ageing?

Many contributors to the literature assume that older adults hold misconceptions specifically in relation to depression, which cause them to believe it is a normal part of old age. This study will ask older people about their attitudes to depression.

Is the understandability phenomenon a feature of late life depression?

The understandability phenomenon equates old age with depression, this is a negative assessment of late life. Therefore, it is possible that the understandability phenomenon is a function of the negative cognitive style inherent to depression.

Hypothesis 1. It is hypothesised that the understandability phenomenon is a function of depression, therefore it is predicted that scores on the measure of understandability will be significantly higher in the depressed group.

Is the understandability phenomenon related to hopelessness?

The construct hopelessness, as measured by the Beck Hopelessness Scale, has been used to refer to negative expectations and attitudes toward the future (Beck et al., 1974), and it has been associated with depression and suicidal in older adults (Szanto, et al., 1998; Rifai, et al., 1994).

Hypothesis 2. It is hypothesised that the understandability phenomenon is related to hopelessness, therefore, it is predicted that scores on the understandability measure will be significantly associated with scores on the BHS in the depressed group but not in the non-depressed group.

Is the understandability phenomenon an ageist misconception?

However, it is also accepted that later life is widely perceived as a time of loss and decline (Butler and Lewis, 1997). As discussed earlier, it has been suggested that the internalisation of negative socio-cultural stereotypes may influence older people's attitudes toward their own ageing (Levy et al., 2002; Levy and Banaji, 2002). Consequently, ageist misconceptions may exist among older people causing them to believe their depressive symptoms are an expected consequence of 'normal' ageing. Therefore, the alternative explanation may be that the understandability phenomenon is a function of an individual's view of their own ageing.

Hypothesis 3. The understandability phenomenon is a function of an individual's self-perceptions of ageing, therefore, it is predicted that participants who strongly

endorse the understandability phenomenon will have more negative views of their own ageing than participants who do not endorse it.

Is the understandability phenomenon related to internalised ageism?

Supplementary, to the previous question it follows that the understandability phenomenon should be associated with internalised ageist beliefs.

Hypothesis 4. The understandability phenomenon is related to internalised ageism, therefore, it is predicted that participants who strongly endorse the understandability phenomenon will show higher levels of internalised ageism than participants who do not endorse it.

In addition to the key questions above, the study also offered the opportunity to explore, in a more controlled manner, the intergenerational biases observed in Laidlaw et al.'s discussion groups. As the primary focus of this study is the understandability phenomenon, the aim was solely to find out if the biases could be replicated. This would help determine whether the original observation was merely an artefact of the methodology of the discussion groups.

Chapter 2. Method

2.1 Design

The study utilized a cross-sectional independent groups design in which a primary care sample, currently receiving treatment for depression, and a sample from the general population were assessed on the five self-report questionnaires listed below. The independent variables were depression, hopelessness, attitudes toward own ageing and internalised ageism. The 'understandability' of late life depression was assessed with three attitude statements that participants rated their agreement with, on Likert-type scales. The purpose of the design was to permit the examination of group differences in the understandability of depression, as well as the strength of associations between the independent variables and understandability.

2.1.1 Ethical approval

The research design was agreed with the Local Research Ethics Committees of both Highland and Fife and the medical director of both Highland and Fife Primary Care Trusts also approved the research. The results of the interview were confidential with the provision that general practitioners would be notified of any individual not previously known to be depressed.

2.2 Participants

2.2.1 Inclusion and exclusion criteria

The participants were recruited from two sites, Highland and Fife, and had to satisfy the following inclusion and exclusion criteria. Participants had to be aged 60 years and above, be able to give written informed consent and have GDS scores of 5 and above (depressed group) or 4 and below (non-depressed group). Participants were excluded from the study if they exhibited evidence of cognitive impairment (Cognitive Impairment Test > 8) or if they were currently receiving ECT for

depression. The source and method of recruitment for both samples is described in the following sections.

2.2.2 Depressed sample

A primary care sample of participants currently receiving treatment for depression was recruited from Clinical Psychology and Psychiatric Services in both Highland and Fife. The researcher initially met clinicians to describe the purpose and design of the study and to answer any questions. Meetings took place with clinicians from the Area Clinical Psychology Service (NHS Highland), the Traveling Day Hospital (Easter Ross, NHS Highland), the Older Adults Team (Easter Ross, NHS Highland), and Westfield Day Hospital (Kirkcaldy, NHS Fife). Consequently, in Highland several clinicians agreed to assist with recruitment by informing suitable patients about the research and providing them with a copy of the information sheet (appendix 2). If a patient wished to take part in the research the clinician gave the patient's contact details to the researcher in order that he could arrange a meeting. In Fife, a registered psychiatric nurse agreed to help recruit and also to assess participants. The nurse was instructed on how to administer the measures and how to obtain written informed consent (appendix 3). Thirty-one patients were referred to the study and 19 met criteria.

2.2.3 Non-depressed sample

A community sample of participants was recruited through Age Concern Scotland (Inverness Branch), and the MacKenzie Day Centre (Inverness). The researcher met with representatives of both organizations to present the aims and objectives of the study and to identify sources of potential participants. Subsequently, the researcher was invited to address several groups of older people throughout Highland region to discuss the research, explain what it would involve and answer any questions. At the end of the presentation a copy of the information sheet was given to each person. The researcher stated he would return a week later and asked that they take this time

to decide whether or not they wished to take part. Forty people were invited to take part in the study and 33 consented.

2.3 Measures

2.3.1 Demographic information (appendix 4)

Demographic information on age, gender, marital status, level of education, occupation, and domestic arrangements were collected, as well as, information on objective and subjective health status, and previous history of depression. Physical health status was measured by recording the number of medical conditions each participant suffered. Participants' also rated, on a visual analogue scale, the amount of pain experienced daily as a result of their medical problems. This approach provided a convenient method of assessing physical health which did not require the review of medical notes. Subjective health status was measured by the item, "In general do you consider yourself to be healthy or unhealthy?" and previous history of depression by the item, "In the past has your doctor treated you for depression?"

2.3.2 The understandability measure (appendix 5)

A literature search revealed no standardised measure of the understandability phenomenon. In related work, Waxman, Carner, and Klein (1984) examined the attitudes of older people toward mental health using a 10-item true-false scale; one of the items addressed attitudes toward depression. However, the structure of this item confounded two important components of the understandability phenomenon as defined in this study, namely; *depression is normal*, and the *treatability of depression*. Seidlitz, Duberstein, Cox, and Conwell (1995) used a five-item Likert-type scale to examine the attitudes of older people toward suicide and assisted suicide, none of the items focussed on views of late life depression. Therefore, to examine this concept a questionnaire was designed for this study, which consists of three attitude statements that reflect the conceptualisation of the understandability phenomenon as described in the introduction. The statements were generated from

the relevant literature (Blanchard, 1994; Cole et al., 1997; see also table 1), the results of the focus group discussions (Laidlaw, Law and Salter, unpublished data), and from the researcher's clinical experience with older people. The statements reflected the notions that 1. there are good reasons for late life depression (i.e. Given the losses and chronic illnesses that older people experience, depression is understandable), 2. depression in late life is normal (i.e. Depression is just a normal part of old age), and 3. low expectation of treatment (i.e. When older people get depressed, there is not much that can be done about it). In addition, two items were included to assess for intergenerational biases. The statements reflected the themes observed in Laidlaw et al.'s discussion groups with older people (i.e. Younger people have little reason to be depressed, and younger people are not expected to be depressed because they are young).

Participants rated their agreement with each statement on a seven point Likert-type scale which ranged from strongly agree to strongly disagree. The construction of the Likert scale followed the recommendations of Kline (1993). The item scores were summed to obtain a total 'understandability' score which ranged from 3 to 21 with higher scores indicative of greater belief that depression is a normal consequence of old age. The two intergenerational bias items were not intended to yield a composite score but were included in an attempt to replicate the findings of Laidlaw et al. (unpublished data).

To test the level of agreement with the researchers' interpretation, and the readability of each attitude statement six judges were asked to assess them. The judges, three community psychiatric nurses, two social workers and one nurse/cognitive-behavioural therapist, who all work with older people, confirmed that the statements were readable and comprehensible, and agreed with the researcher's interpretation of each statement.

2.3.3 Geriatric Depression Scale-15 (GDS-15; Sheikh and Yesavage, 1986)

The GDS-15 (appendix 6) is a short version of the 30-item Geriatric Depression Scale (GDS-30; Yesavage, et al., 1983) which was developed specifically for rating depression in older people. The GDS-15 is considered to be a reliable and valid measure of depression in older persons. The Royal College of Physicians and the British Geriatric Society (RCOP and BGS, 1992) have recommended it for routine use and it has been recommended for screening programmes for the over 75s by the Royal College of General Practitioners (Williams and Wallace, 1993). The GDS-15 has been shown to be a suitable instrument in a community sample of the oldest old, the over 85s, (de Craen, Heeren, and Gussekloo, 2003), a UK community sample of over 75s (Osborn, et al., 2002), as part of an annual over-75s health check in primary care (Arthur, Jagger, Lidesay, Graham, and Clark, 1999), and a community sample of depressed over 65s (Herrmann, et al., 1996). It can be self or verbally administered and consists of 15 yes-no questions that address various depressive symptoms. The item scores are summed to produce a total score which ranges from 0 to 15. A cut-off score of 5 or more indicates probable depression.

2.3.4 Beck Hopelessness Scale (BHS; Beck, Weissman, Lester, and Trexler, 1974)

The BHS (appendix 7) is a measure of the psychological construct “hopelessness”, which refers to a person’s negative attitudes and expectations about their future. This definition of hopelessness corresponds with part of the researcher’s conceptualisation of the understandability phenomenon: late life depression is inevitable, and there is little that can be done about it. The BHS has demonstrated good reliability and validity in adult clinical populations aged up to 80 years (Beck and Steer, 1988). Recent research examining the relationship between hopelessness and suicide in a depressed older adult population used the BHS as their measure of hopelessness (Rifai, George, Stack, Mann, and Reynolds, 1994; Szanto, Reynolds, Conwell, Begley, and Houck, 1998). Whilst not developed as a measure of hopelessness in adult normal populations, the measurement characteristics of the BHS have been investigated in such populations (Durham, 1982; Greene, 1981, as cited by Beck and

Steer, 1988). The BHS can be self or verbally administered and consists of 20 true-false statements each of which is scored 1 or 0. The item scores are summed to obtain a total 'hopelessness score' which can range from 0 to 20 with high scores indicating greater hopelessness (Beck and Steer, 1988; Beck et al 1974).

2.3.5 The Attitude to Own Ageing sub-scale from the Philadelphia Geriatric Centre Morale Scale (PGC Morale Scale; Lawton, 1972, 1975; see appendix 8)

The PGC Morale Scale is a widely used 15-item measure of subjective well-being in older persons. The measure was developed by Lawton (1972, 1975), and reinterpreted by Liang and Bollen (1983) and found to yield three subscales, agitation, dissatisfaction and attitudes toward own ageing. Two recent studies, Maier and Smith (1999) and Levy et al. (2002) found the attitude to own ageing sub-scale was a significant predictor of mortality. Levy et al. (2002) adopted the subscale as a measure of self-perceptions of ageing. Similarly, this study has included the sub-scale as a measure of attitudes toward self-ageing. The sub-scale is a five-item "yes-no" self-report questionnaire, which can also be administered in an interview style. In this study this was necessary on a few occasions with participants who were visually impaired. Participants responded to items one, two, three, and five with a "No" scored as 1, or a "Yes" scored as 0. The first and third items were reversed scored to make all items measure a negative ageing self-perception. Participants responded to the fourth item by selecting either "better" or "worse". Participants received a total score ranging from 0 to 5, with a higher score indicating a more negative ageing self-perception.

2.3.6 The Rame Questionnaire (Parnell, Worthington, Nursing, and Bender, 2001)

The Rame questionnaire (appendix 9) is a newly developed measure of internalised ageism which shows good reliability (Parnell, Worthington, Nursing, and Bender, 2001) but which has not been tested on samples large enough to allow a factor analysis to be conducted or normative scores to be established. One of the aims of the current study is to examine the relationship between internalised ageism and the

understandability phenomenon. The Rame questionnaire was the only instrument located by the researcher which explicitly addresses internalised ageism and which was developed specifically for use with older people. The Rame is a 23-item self report questionnaire which includes items about fear of the ageing process, deteriorating physical and intellectual capability, illness, inability to learn new tasks, a reduction of sexual desire, as well as beliefs that constant help is required by old people, that life's opportunities and achievements are confined to the past and that old people have little to contribute to society (Parnell et al, 2001). Responses were on a four point Likert-type scale and scored 0 to 3, with 3 indicating high ageism.

2.3.7 The 6 item cognitive impairment test (6 CIT; Katzman, Brown, Fuld, Peck, Schechter, and Schimmel, 1983)

The 6 CIT (appendix 10) is an abbreviation of the 26-Item Blessed Information-Memory-Concentration Scale (BIMC; Blessed, Tomlinson, and Roth, 1968). When compared with the BIMC the 6 CIT has been shown to be as sensitive to the presence and severity of dementia (Davis, Morris, and Grant, 1990). It has also been shown to correlate well with the Mini-mental State Examination (MMSE; Folstein, Folstein, and McHugh, 1975) in identifying dementia (Davous, Labour, Debrand, and Rondot, 1987; Brooke and Bullock, 1999). The latter study found the 6 CIT to be more sensitive to mild dementia than the MMSE in a primary care sample. It has been incorporated as the cognitive screening section of the Easy Care Elderly Assessment System (Philp, 1997), which is a pan-European project aimed at developing a standard for assessing the quality of life of older people. The brevity of the 6 CIT was also a consideration when designing the study. It is a faster and simpler test of cognition than the MMSE and thus reduces the demand on participants. The six items of the 6 CIT consist of three orientation questions, year, month, and time of day, and months backward, name and address, memory phrase, and count from 20 to 1. A cut-off score of 8 or more indicates probable cognitive impairment (Brooke and Bullock, 1999; Katzman, et al, 1983).

2.4 Pilot-test

A pilot-test was undertaken to give the researcher the opportunity to rehearse and time the procedure, and determine if the materials and instructions were comprehensible to participants. Three men and four women (mean age 78.1 years, SD 8.2) were recruited from the MacKenzie Day Centre (Inverness). For each participant the procedure took an average of 25-30 minutes. Feedback suggested that the instructions were clear and the materials comprehensible. Several participants said they knew older people who were depressed and one said they knew someone who had committed suicide. Several also asked, "What is depression?" "How would depression be recognised?" and "How is depression diagnosed?" Following the researcher's suggestion the participants indicated that it would be helpful to include a definition of depression with the questionnaires. On further discussion it was decided that this would best be included as an introduction to the understandability measure. Consequently, this measure was amended to include a brief description of depression, adapted from Fennell (1989).

2.5 Procedure

2.5.1 Depressed sample

The researcher assessed the patients in their own homes or in premises used by the travelling day hospital. The patient was given a copy of the information sheet and the purpose of the study and procedures for consent and confidentiality were explained followed by an opportunity to ask questions. After obtaining written consent the researcher commenced the assessment by administering the semi-structured demographic interview followed by the brief test of cognitive impairment. The participant was then given a pack of questionnaires and a pencil. The researcher read aloud the instructions for each questionnaire as it was attempted. The sequence of measures in each pack was varied in an attempt to limit order effects for example fatigue. With visually impaired participants, a departure from this procedure was necessary, in that the questionnaires were verbally administered. The nurse who

assessed patients from Westfield Day Hospital (NHS Fife) followed the same procedure

Following the completion of the questionnaires the participant was thanked for taking part in the study and informed that the results of the study would be made known via their key worker. The consent forms were stored separately from the measures to ensure confidentiality. Participants were allocated a number written on the measures pack ready for data entry.

2.5.2 Non-depressed sample

Participants were assessed in the MacKenzie Day Centre and in community centres in Inverness and Fort William. The participant was given another copy of the information sheet to remind him/her of the purpose of the study and what it involved, and any questions were answered. Written agreement was then obtained by asking the participant to read and sign the consent form. The procedure was the same as that detailed above. The researcher administered the semi-structured demographic interview and cognitive screen. The participant was then given a pack of questionnaires and a pencil. The researcher read aloud the instructions for each questionnaire as it was attempted. As described above the sequence in which the measures were presented was varied to limit order effects, and visually impaired participants necessitated verbal administration of the assessments.

Following the completion of the questionnaires the participant was thanked for taking part in the study and informed that the results of the study would be made known via Age Concern or community centre staff. The consent forms were stored separately from the measures in order that participants could not be identified. Participants were allocated a number written on the measures pack ready for entry to the database.

Chapter 3. Results

The analytical strategy will be presented first, followed by the sample characteristics, and the reliability analysis of the understandability measure. This will be followed by the examination of the main hypotheses and research questions, and other findings.

3.1 Statistical analysis

The data were analysed using SPSS for Windows (version 10). Analysis of covariance was used for between group comparisons when controlling for possible confounded variables. Independent t-tests were also used except when the data departed significantly from the assumptions of equal variance and normality, in which case a Mann-Whitney test was performed. The strength of association between variables was examined with Pearson's correlations or Chi-square tests. The significance level was set at 0.05. Conventionally, for hypothesis testing a significance level of 0.05 is considered the optimal balance between the risks of committing a type I error (rejecting the null hypothesis when it is correct) and a type II error (failing to detect significance when it is present) (Harris, 1986; Miller, 1984).

An important clinical question (not adequately addressed by a cross-sectional design) is the power of the understandability phenomenon to predict depression and hopelessness. Therefore, it was initially intended to examine the predictive power of the variables in combination using multiple regression. However, although the use of multiple regression is not precluded by the small sample size, the interpretation of such analyses would have to be qualified in order that the results were meaningful and reliable. Tabachnick and Fidell (1996) suggest that the interpretation of multiple regression is less problematic if the ratio of participants to predictors is large. They suggest the sample size should be $\geq 50 + 8(\text{multiplied by the number of predictors})$. At least four predictors would have been examined in this study requiring a minimum sample size of 84. Other authors have suggested more stringent criteria, for example Bausell (1986) suggests studies employing multiple regression should have at least 200 participants to ensure a participant to variable ratio of 25:1.

3.2 Sample characteristics

3.2.1 Total sample

Fifty-two community dwelling older adults were recruited to the study, 16 male (31 per cent) and 36 female (69 per cent) with a mean age of 75.4 years (SD 9.1; range 60 to 93 years). Table 2 shows the demographic characteristics of the participants by depressed and non-depressed group. The median age of the sample (76 years) was used to divide the participants into two age categories, young-old (≤ 76 years) and old-old (> 76 years).

3.2.2 Non-depressed group

Forty people were invited to participate in the study, seven declined, therefore 33 participants were recruited from Age Concern and the MacKenzie day centre (Inverness). Four of the participants recorded GDS scores indicating probable depression. In order to best represent the data, these patients were included in the depressed group for analysis. Therefore, the non-depressed group consisted of 29 participants (see table 2 below).

3.2.3 Depressed group

Thirty-one depressed patients were invited to participate in the study, 12 patients were excluded for the following reasons: five showed evidence of cognitive impairment (6CIT > 8), six declined to participate, and one was receiving ECT. Therefore, 19 participants were recruited to the study from clinical psychology and psychiatric services. As described above, a further four participants were entered for analysis as depressed participants because they recorded GDS scores above five. Therefore, in total the depressed group comprised 23 participants.

Table 2. Demographic characteristics of participants by depressed and non-depressed group

	Depressed (n=23)		Non-depressed (n=29)	
Characteristic	Mean	SD	Mean	SD
Age	73.9	8.4	76.4	9.6
6CIT	2.8	1.7	2.7	1.6
Number of physical illnesses	1.7	0.9	1.3	1.1
	N	%	N	%
Gender				
Male	9	39.1	7	24.1
Female	14	60.9	22	75.9
Age category				
Young-old (< 76 years)	12	52.2	14	48.3
Old-old (> 76 years)	11	47.8	15	51.7
Subjective health				
Healthy	15	65.2	26	89.7
Unhealthy	8	34.8	3	10.3
Pain				
Pain	5	23.8	14	48.3
No pain	16	76.2	15	51.7
Previous history				
Yes	17	77.3	4	13.8
No	5	22.7	25	86.2
Marital Status				
Married	7	30.4	12	41.3
Widowed	9	39.1	16	55.1
Single/Divorced	7	30.4	1	3.4
Education				
High school	15	71.4	22	78.6
Other (Public school)	3	14.3	1	3.6
Further/Higher education	3	14.3	5	17.9

3.2.4 Demographic characteristics

As indicated by the mean values in table 2 there was no significant difference between depressed and non-depressed groups in relation to age ($t(50) = 1.007$; $p =$

0.319), cognitive screen ($t(49) = 0.052$; $p = 0.959$), and number of medical illnesses ($t(48) = 1.356$; $p = 0.182$). There were no significant relationships between group (depressed, non-depressed) and age category ($\chi^2 = 0.78$; $df = 1$; $p = 0.780$), marital status ($\chi^2 = 0.663$; $df = 1$; $p = 0.416$), gender ($\chi^2 = 1.353$; $df = 1$; $p = 0.245$), subjective health ($\chi^2 = 3.244$; $df = 1$; $p = 0.72$), or pain related to medical conditions ($\chi^2 = 3.095$; $df = 1$; $p = 0.79$) suggesting the groups did not differ on these variables.

There was a significant association between previous history of depression and depression status ($\chi^2 = 20.812$; $df = 1$; $p < 0.0005$). Within the depressed group 77 per cent of participants had a previous history of depression and 86 per cent of participants in the non-depressed group had no previous history of depression.

3.3 Reliability analysis of the measure of ‘understandability’

The attitudes to depression items were developed to measure the understandability phenomenon. Bausell (1986) suggests that it is good practice to report how well a measure functions under the conditions of a study, particularly when the measure has been specifically developed to produce a composite score. Cronbach’s Alpha is a test of internal consistency based on the average inter-item correlation. A high average correlation between items suggests that the items measure the same construct (Bausell, 1986), and therefore deriving a combined score from the items is justified. The reliability of the understandability measure was good within this sample (Cronbach’s alpha = 0.74).

3.4 Main Hypotheses and research questions

3.4.1 Hypothesis 1. It is hypothesised that the understandability phenomenon is a function of depression, therefore it is predicted that scores on the measure of understandability will be significantly higher in the depressed group.

As shown by table 3 there was a significant difference between the depressed and non-depressed groups in relation to GDS scores ($t(52) = 12.2$; $p < 0.0005$; 2 tailed). Participants in both the depressed and non-depressed groups rated their agreement

with each understandability statement on a seven point Likert-type scale ranging from ‘strongly agree’ to ‘strongly disagree’. For descriptive purposes table 4 below presents the pooled responses by depressed and non-depressed groups for each statement along with the percentage level of agreement. As the midpoint of the scale, the number 4 was chosen as an ‘undecided’ category, responses in the ranges 1-3 and 5-7 were pooled to indicate ‘agree’ and ‘disagree’ respectively. As shown in table 4, the majority of participants in both the depressed and non-depressed groups believed depression in late life is an understandable reaction to loss and illness and that it is a normal part of old age. However, fewer participants in both groups endorsed the idea that little can be done to relieve depression in late life.

Table 3. Means and SD’s of GDS scores by depressed and non-depressed groups

Measure	Depressed (n=23)		Non-depressed (n=29)		Significance level
	Mean	SD	Mean	SD	
GDS	8.7	2.3	2.1	1.4	t = 12.2*

*p < 0.0005

In preparation for testing the prediction that depression will have an effect on the endorsement of the understandability phenomenon, correlations between the understandability measure and possible confounded variables (e.g, age, gender, number of medical conditions, pain related to medical conditions) were calculated. Where there were significant correlations, the relevant variables (age and number of medical conditions) were partialled out using an analysis of covariance. Therefore, a one-way analysis of covariance (ANCOVA) was performed on the understandability of depression with depression status (depressed, non-depressed) as the independent variable. The covariates were age and number of medical conditions. The data satisfied the assumptions of homogeneity of regression and equality of variance. Table 5 presents the unadjusted means and the adjusted means (following ANCOVA) for the understandability of depression.

Table 4. Participants responses to the understandability items by depressed and non-depressed group (n (%))

Understandability Items	Depressed (n = 23)			Non-depressed (n = 29)		
	Agree	Disagree	Undecided	Agree	Disagree	Undecided
Given the losses and chronic illnesses that older people experience depression is understandable	17 (73.9)	3 (13.0)	3 (13.0)	20 (69.0)	6 (20.7)	3 (10.3)
Depression is just a normal part of old age	17 (73.9)	6 (26.1)	--	16 (55.2)	11 (37.9)	2 (6.9)
When older people get depressed there is not much that can be done about it	9 (39.1)	12 (52.2)	2 (8.7)	11 (37.9)	14 (48.3)	4 (13.8)

As table 5 shows after adjusting for covariates there was no significant effect of depression on the endorsement of the understandability phenomenon ($F(1,48) = 0.954, p = 0.334$). A summary table of the ANCOVA and table with the adjusted means can be found in appendix 11.

The summary table also demonstrates the significant relationship of the covariates age ($F(1,48) = 7.552; p < 0.01$), and number of medical conditions ($F(1,48) = 14.918; p < 0.01$) with the understandability phenomenon.

Table 5. Unadjusted and adjusted means by depressed ($n=23$) and non-depressed groups ($n=29$) for the understandability measure

	Unadjusted means	Adjusted means
Understandability	Mean	Mean
Depressed	14.4	14.2
Non-depressed	13.0	13.1

Given that this was a test of the key hypothesis a retrospective power analysis was carried out. The effect size between the depressed and non-depressed groups is small (0.2). To provide sufficient power (0.8) to detect such an effect size would require 393 participants in each group (Cohen, 1992). This may indicate that the effect size in this study is not statistically important. Arguably, if the understandability phenomenon were a function of the negative cognitive style inherent to depression it would produce a medium or large effect size. This study had sufficient power to detect a large effect size. To detect a medium effect size 64 participants per group would be required, which is more practical than 393 participants per group. Hence, perhaps a replication should be attempted before firmly concluding that the understandability phenomenon is not a feature of late life depression.

3.4.2 Hypothesis 2. The understandability phenomenon is related to hopelessness, therefore, it is predicted that scores on the understandability measure will be

significantly associated with scores on the BHS in the depressed group but not in the non-depressed group.

To test the prediction that there will be a significant relationship between understandability and hopelessness scores in the depressed group only, two Pearson *r* partial correlations were performed controlling for age and medical conditions; one for the depressed group and one for the non-depressed group. Table 6 presents the correlation coefficients and significance level for both analyses.

As shown in table 6 there was no significant association between hopelessness and understandability scores in the depressed group ($r = +0.274$; $n = 19$; $p = 0.229$; 2 tailed) and there was no significant association between hopelessness and understandability scores in the non-depressed group ($r = +0.238$; $n = 25$; $p = 0.232$; 2 tailed).

Table 6. Pearson *r* correlations for hopelessness and understandability scores by depressed and non-depressed groups

	Depressed (n=23)	Non-depressed (n=29)
Understandability		
Hopelessness		
Correlation	+0.274	+0.238
Significance level	0.229	0.232

Upholding this hypothesis relied on the result within the depressed group. It is widely accepted that hopelessness is a negative cognition specific to depression. As shown in table 7, the depressed group showed a significantly higher level of hopelessness than the non-depressed group ($U = 112.500$; $N_1 = 23$, $N_2 = 29$; $p < 0.0005$; 2 tailed). In the context of depression however, no significant association was found between hopelessness and the understandability phenomenon.

However, the following caution should be taken into account. The study may not have had sufficient statistical power. According to Clark-Carter's (1997) power tables for Pearson's r correlation, to obtain power of 0.8 with a large effect size, would require 30 participants. The non-depressed with 29 participants was large enough to achieve statistical significance. However, the depressed group with 23 participants was under power. To obtain sufficient power with a medium effect size would require 80 participants.

Table 7. Means and SD's of hopelessness scores by depressed and non-depressed group

Measure	Depressed (n=23)		Non-depressed (n=29)		Significance level
	Mean	SD	Mean	SD	
BHS	8.4	4.7	3.3	2.4	U = 112.500*

* $p < 0.0005$

Is the understandability phenomenon a common ageist misconception?

3.4.3 Hypothesis 3: The understandability phenomenon is a function of an individual's self-perception of ageing, therefore, it is predicted that participants who strongly endorse the understandability phenomenon will have more negative views of their own ageing than participants who do not endorse it.

To test the prediction that the understandability phenomenon is related to self-perceptions of ageing a one way ANCOVA was performed on attitudes toward own ageing with the understandability phenomenon as the independent variable. The median value of the understandability scores (13) was used to divide the participants into two groups for analysis. Participants scoring 13 or higher were considered to believe strongly that depression is a normal part of ageing and participants scoring 12 and lower as having minimal belief in the understandability of late life depression. The method was adopted from Waxman et al. (1984) who used it in their examination of older people's attitudes in relation to the utilisation of mental health services.

The covariates were depression (GDS scores) and hopelessness (BHS scores). The data satisfied the assumptions of homogeneity of regression and equality of variance. Table 8 below presents the unadjusted means and the adjusted means for attitudes toward own ageing.

Table 8. Unadjusted and adjusted means for attitudes toward own ageing by level of belief in the understandability of depression (Strong belief n=29; minimal belief n=23)

	Unadjusted means	Adjusted means
Attitudes to own ageing	Means	Means
Strong belief	3.2	2.9
Minimal belief	1.8	2.0

After adjusting for covariates there was a significant effect of the independent factor (i.e. level of belief in the understandability phenomenon) ($F(1,48) = 7.763$; $p = 0.008$). Participants who believed strongly in the understandability of late life depression displayed more negative attitudes toward their own ageing compared with those who did not endorse the understandability phenomenon.

A summary table of the ANCOVA is presented in appendix 12. The result of the ANCOVA suggests that independent of depression, negative attitudes toward own ageing are related to the endorsement of the understandability phenomenon.

3.4.4 Hypothesis 4: The understandability phenomenon is related to internalised ageism, therefore, it is predicted that participants who strongly endorse the understandability phenomenon will show higher levels of internalised ageism than participants who do not endorse it.

To test this prediction a one way ANCOVA was performed on internalised ageism scores with the understandability phenomenon as the independent variable

controlling for depression (GDS scores) and hopelessness (BHS scores). The data satisfied the assumptions of homogeneity of regression and equality of variance. Table 9 below presents the unadjusted and adjusted means for internalised ageism.

As table 9 shows after adjusting for covariates there was a significant effect of internalised ageism on the endorsement of the understandability phenomenon ($F(1,48) = 6.077$; $p = 0.017$). Participants with high levels of internalised ageism (as measured by the Rame) tended to strongly endorse the understandability phenomenon compared with those with lower levels of internalised ageism. A summary table of the ANCOVA can be found in appendix 13.

Table 9. Unadjusted and adjusted means for internalised ageism by level of belief in the understandability of depression (Strong belief $n=29$; minimal belief $n=23$)

		Unadjusted means	Adjusted means
Internalised ageism	Means		Means
Strong belief	33.5		32.6
Minimal belief	25.5		26.6

3.5 Other findings

3.5.1 Demographic correlates of the understandability phenomenon

In the sample as a whole, age and number of medical conditions were the demographic variables most significantly related to the understandability phenomenon. There were no significant relationships between understandability and gender, marital status, perceived health, pain related to medical problems, living arrangements and level of education.

In relation to age, a comparison of age categories revealed that participants in the old-old category (> 76 years; $n = 26$) endorsed the understandability phenomenon more than their comparisons in the young-old category (≤ 76 years; $n = 26$). Figure 3

below presents the numbers in each age category that agreed with each of the understandability statements. A t-test comparing young-old (mean = 11.9; SD = 4.9) and old-old (mean = 15.4; SD = 4.2) scores on the understandability measure revealed that the difference between means was significant ($t(52) = 2.749$; $p = 0.008$). Therefore, in this sample the oldest-old believed depression in later life is an understandable and normal consequence of old age more than their younger comparisons.

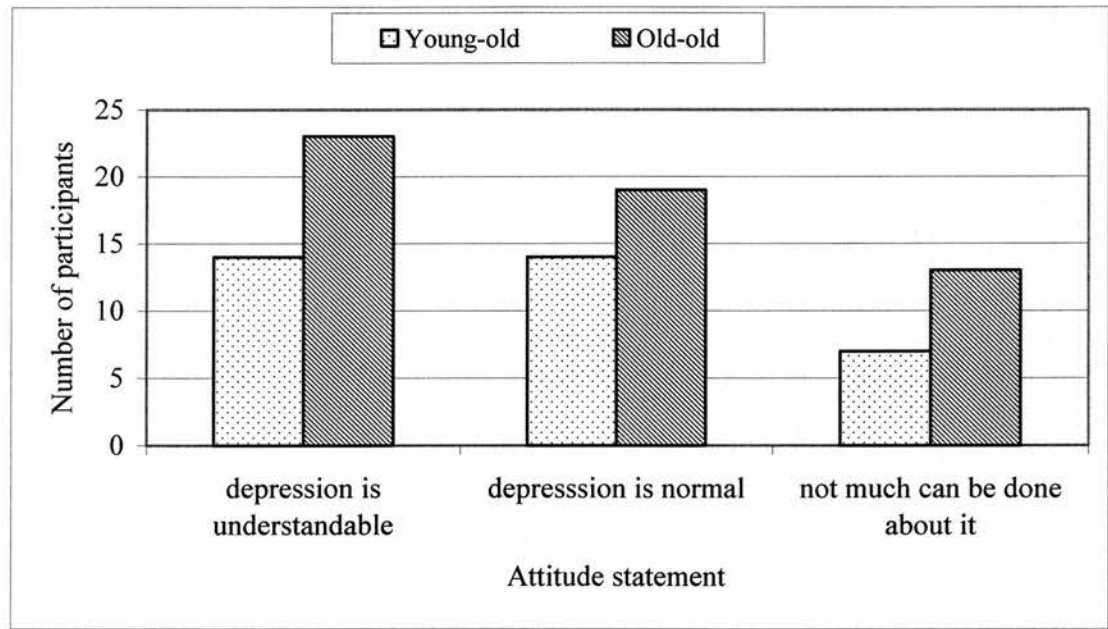


Figure 3. Number of young-old and old-old participants agreeing with each of the three understandability statements

To explore this trend further a post hoc analysis was carried out to determine if the old-old and young-old participants differed in relation to the independent variables or demographic characteristics. Table 10 presents the means and SD's by age category for each of the independent variables. There were no significant differences between the young-old and old-old on the GDS ($t(50) = 0.180$; $p = 0.858$), BHS ($t(50) = 0.660$; $p = 0.512$), attitudes toward own ageing ($t(50) = 1.434$; $p = 0.158$) and internalised ageism ($t(50) = 1.193$; $p = 0.238$).

The groups did not differ on any of the demographic variables with the exception of marital status. There was a significant association between marital status and age category ($\chi^2 = 14.016$; $df = 1$; $p = 0.0005$). As shown in table 10 a higher proportion (88.5 per cent) of participants in the old-old group were without a life partner (e.g. widowed) compared with 38.5 per cent of the young-old group.

Table 10. Means and SD's of the independent variables and marital status by age category (young-old, old-old)

	Young-old (n = 26)		Old-old (n = 26)	
Measure	Mean	SD	Mean	SD
Geriatric Depression scale	5.1	4.2	4.9	3.4
Beck Hopelessness Scale	5.3	4.6	6.1	4.2
Attitudes toward own ageing	2.3	1.6	2.9	1.5
Internalised ageism	28.4	9.6	31.5	9.7
	<i>N</i>	%	<i>N</i>	%
<i>Marital status</i>				
Partnered	16	61.5	3	11.5
Alone	10	38.5	23	88.5

Lastly, an exploratory t-test was carried out to compare depressed old-old ($n=11$, $mean=16.8$, $SD= 3.7$) with non-depressed old-old ($n=15$, $mean=14.3$, $SD=4.4$) on the understandability phenomenon. The t-test revealed that there was no significant effect of depression on endorsement of the understandability phenomenon in the old-old group ($t(26) = 1.573$; $p > 0.05$; 2 tailed).

3.5.2 Intergeneration negative bias

Table 11 presents the pooled responses of the two intergenerational bias statements. More than half of the participants disagreed with the statements, 'Younger people have little reason to be depressed' (57.7 per cent) and 'Younger people are not expected to be depressed' (53.8 per cent). However, as shown in table 11 a sizeable

percentage of participants did endorse these ideas, 36.5 per cent and 44.2 per cent respectively. There was a significant correlation between the biases ($r = 0.399$; $n = 52$; $p = 0.014$). However, neither bias was significantly associated with all three understandability statements. The first bias showed no significant relationship to any of the three understandability statements and the second bias ‘Younger people have little reason to be depressed’ was significantly related to only two of the statements. This result suggests the biases are not solely a reflection of the understandability phenomenon as hypothesised by Laidlaw et al. (unpublished results) but may reflect a more general ageist belief. As described earlier these items were included solely for replication and descriptive purposes and therefore are not considered for further analysis.

Table 11. Participants’ responses to the intergenerational bias statements (n (%))

Attitude statement	Agree	Disagree	Undecided
Younger people have little reason to be depressed	19 (36.5)	30 (57.7)	3 (5.8)
Younger people are nor expected to be depressed because they are young	23 (44.2)	28 (53.8)	1 (1.9)

3.6 Summary of findings

In sum, the majority of older adults in this study believed depression is a natural consequence of ageing and that there are good reasons for depression in late life. As such, this suggests the understandability phenomenon does exist among older adults. More specifically evidence of the following was established:

- The belief that depression is a normal or expected consequence of old age was found in a depressed and non-depressed sample.
- The understandability phenomenon does not appear to be a specific function of depression. There was no evidence of a relationship between the understandability phenomenon and hopelessness in the context of depression.

- Rather, the understandability phenomenon appears to be related to negative self-perceptions of ageing and internalised ageist beliefs.
- Age and number of medical conditions were the demographic variables most significantly associated with the understandability phenomenon.
- The oldest-old subsection of the sample endorsed the phenomenon more than the young-old.
- Marital status emerged as the only variable which distinguished the old-old from the young-old

These findings must be interpreted in light of the limitations imposed by sample size particularly the findings in relation to subsections of the sample.

Chapter 4. Discussion

An overview and discussion of the main findings will be followed by a discussion of the limitations of the study. The chapter will close with recommendations for future research.

4.1 Endorsement of the understandability phenomenon

The aim of this study was to determine if older adults believe depression is a normal consequence of old age. In both the depressed and non-depressed samples, clear majorities of older adults believed depression is a normal part of old age and an understandable reaction to the losses and illnesses which can occur in late life. Less than a clear majority, but over one third of depressed and non-depressed older adults believed there is not much that can be done to alleviate late life depression (see table 4).

In the sample as a whole, the pattern of endorsement of the understandability phenomenon was the same as that described for the depressed and non-depressed groups. As such, the results of the study can be interpreted as evidence for a concept that has been referred to frequently in the gerontology literature but until now has had no empirical support. The results also add credence to the claim that older adults tend not to report depression or suicidal ideation to their general practitioners because they believe depression is normal and to be expected.

Two alternative explanations for the understandability phenomenon were tested and the results of these hypotheses will be discussed below.

4.2 Is the understandability phenomenon a function of depression?

The specificity hypothesis of the cognitive theory of depression predicts that depressed persons perceive themselves and their future negatively. This prediction has been tested and confirmed in repeated studies. Depressed people think more

negatively, and are more hopeless about the future relative to other clinical groups and non-depressed controls (Haaga, et al., 1991). Whilst anxiety disorders also exhibit negative beliefs they differ from those of depression in that they are concerned for example, with perceived future danger (Hammen, 1997). Whereas, the negative cognitions intrinsic to depression emphasise self-blame, negative predictions and hopelessness (Blackburn and Twaddle, 1996). It is with the latter elements that the understandability phenomenon was hypothesised to be related.

First, there was no significant difference between the depressed and non-depressed groups in relation to the endorsement of the understandability phenomenon. Therefore, the results of the study demonstrated that the understandability phenomenon is not specific to depression. Thus contradicting the specificity prediction of the cognitive theory of depression.

Second, there was no significant association between the understandability phenomenon and hopelessness in the context of depression. Therefore, the results of the study demonstrated that the understandability phenomenon is not associated with hopelessness in a depressed sample. As predicted there was no significant association between understandability and hopelessness in the non-depressed sample. However, the key test of this hypothesis was the test of association within the depressed sample.

If the understandability phenomenon as hypothesised is a negative cognition specific to depression then it is probable it would be evident in a depressed sample to a significantly higher level than a non-depressed sample. Furthermore, it is likely that the understandability phenomenon (as conceptualised in this study) would also demonstrate an association with hopelessness within a depressed sample. These findings in combination suggest that the understandability phenomenon is not a function of the negative thinking style intrinsic to depression. Therefore, in terms of the cognitive theory of depression the understandability phenomenon is not a descriptive aspect or cognitive concomitant of late life depression.

4.3 Is the understandability phenomenon an ageist misconception?

As predicted there was a significant relationship between attitudes toward own ageing and the understandability phenomenon. Older adults who strongly endorsed the understandability phenomenon also held negative self-perceptions of ageing. Furthermore, as predicted there was a significant relationship between internalised ageism and the understandability phenomenon. Participants who strongly endorsed the understandability phenomenon also displayed high levels of internalised ageist beliefs.

Therefore, on the basis of the current findings the understandability phenomenon is not a feature of late life depression but is most likely a product of an individual's beliefs about old age and the ageing process.

An individual's beliefs about ageing are influenced by societal perceptions of ageing. That is, social perceptions of old age shape an individual's attitude to their own ageing (Levy et al., 2002; Coleman, 1996). Negative societal perceptions learned throughout development and beyond may lead to the formation of beliefs that hold old age to be a difficult and depressing time. Coleman et al.'s (1993) longitudinal study, which was discussed earlier demonstrated that a negative attitude to ageing was predictive of low self-esteem and depression in older adults. The subliminal priming studies described earlier (Levy et al., 2002) provide evidence of the internalisation of ageist beliefs and the effect they have on older individuals (e.g. reduced performance on a range of cognitive and behavioural tasks). Therefore, beliefs about old age and ageing can influence an older person's sense of self and identity (Coleman, 1996).

Although there is no precise analysis of how internalised ageism may develop it is possible to speculate. It is widely accepted that ageism is still prevalent in societies (particularly Western cultures). Myths and negative stereotypes about ageing are commonplace and promote the perception that old age is a time of declining physical and mental capacities (Powell, 1998; Butler and Lewis, 1977). Stereotypes suggest older people are tired, slow, ill, forgetful, and depressed (Nelson, 2001; Powell

1998). Children are exposed to these stereotypes from a young age through both explicit and implicit means. For example, explicit references such as 'Poor grandmother can't walk fast' as well as simple observation may be what causes negative attitudes to be learned (Levy and Banaji, 2002), and their maintenance may be assisted by the widespread institutionalised acceptance of negative attitudes about old age. Children as young as six years can report the age stereotypes of their culture (Isaacs and Bearison, 1986). There is no reason to presume that society was any less negative in relation to old age when the current generation of older adults were children. Throughout this period society has favoured youth (and continues to do so) and old age has been perceived as undesirable (Nelson, 2001).

To summarise the findings of the study, the understandability phenomenon is not a cognitive concomitant of late life depression rather it appears to be a common ageist misconception shared by both depressed and non-depressed older adults. Nevertheless, the understandability phenomenon may still have an influence on the experience of late life depression. For example, if older adults believe they are depressed because they are old or ill this may influence the process and outcome of treatment.

4.4 Clinical implications

This is the first study to utilise the understandability measure therefore comparison with previous research is not possible. However, an examination of the findings is perhaps discouraging. For example, the majority of participants in both the depressed and non-depressed groups believed depression is a normal aspect of old age and a sizable minority of participants in both groups had low expectations of treatment (see table 4).

This may have implications for the psychological treatment of late life depression. For example, if an older person believes the reason he is depressed is because he is old and/or ill, then he may perceive psychological treatment as inappropriate and if he believes that depression in late life is not treatable then most likely he will have a

pessimistic view of treatment outcome. Clinicians need to be aware that older adults hold such beliefs about depression, as it is possible they may hinder engagement and adherence to treatment. It is important then, for the clinician to assess their older patient's beliefs about depression and the treatment of depression during the process of assessment and formulation. Otherwise an older person's belief in the understandability of depression may present as an obstacle to treatment at a later stage in therapy. Given the results of this study it appears that ascertaining the oldest-old's beliefs about depression is especially important. This section of the sample showed significantly higher levels of endorsement of the understandability phenomenon compared to their younger comparisons.

4.5 Demographic correlates of the understandability phenomenon

In the sample as a whole the factors most significantly related to understandability were age and number of medical conditions. There were no effects of gender, marital status, perceived health, living arrangements, pain as a result of medical conditions or level of education.

The fact that there was no effect of gender suggests that the understandability phenomenon is a belief common to older adults regardless of gender. Arguably it might have been expected that women would endorse it more than men because late life depression is more prevalent in women and therefore may seem more 'normal'.

Pain related to medical conditions was included as an indication of the burden of medical illness. It was related to the variable 'number of medical conditions' at the 5 per cent level but surprisingly was not related to the understandability phenomenon. A possible explanation for this is that the sample was an active group of older people few of whom were physically disabled, and in general appeared quite independent. Therefore, this sample of older people may not have experienced great amounts of pain or if they did perhaps it was not perceived as such. For example, the majority of participants perceived themselves as healthy. However, number of medical problems

was related to understandability. It is possible that this variable is representative of the burden of medical illness.

The oldest-old endorsed the understandability phenomenon more than the young-old. Marital status emerged as the only variable which differentiated these groups. The majority of the old-old were without a partner (i.e. widowed). Being without a partner may be an indication of social isolation and loneliness. Therefore, a possible explanation for the greater endorsement of the understandability of depression in this sample of old-old participants could be increased levels of social isolation in comparison to the young-old. It is worth noting that according to Cattell (1988 as cited by Woods, 1996) the main precipitants of late life suicide included isolation and loneliness and physical illness. Perhaps as well as the known risk factors for late life suicide (e.g. male gender, older age, unmarried status, depression) a strong belief in the understandability of late life depression is also a factor in the decision making process of older suicides. This of course is speculation and would require further research.

4.6 Alternative explanations for the results

It is important to consider rival explanations for the results of this study. For example, it has been suggested that older adults compared with younger people may be less psychologically minded or may lack “mental health literacy” (Fisher and Goldney, 2003; Hasin and Link, 1988) and that this may account for their reluctance to report depression to health professionals. As defined by Jorm et al. (1997 cited by Fisher and Goldney, 2003) mental health literacy is “the knowledge and beliefs about mental disorders which aid their recognition or prevention.” Fisher and Goldney (2003) found that older adults (over 65 years) were significantly less able than their younger comparisons to identify depression in a vignette. Hasin and Link (1988) reported a similar finding using the same methodology.

The fact that older adults may be less psychologically minded than younger people is not an adequate explanation of the current findings. This study did not ask

participants to identify depression from a vignette rather this study assessed the attitudes of older adults in relation to the understandability of depression in late life.

4.7 Limitations

4.7.1 Statistical power analysis (required sample size)

During the design of this study a power analysis was performed to establish the required sample size. Cohen's (1992) tables were used to determine the sample size necessary for 0.8 power to detect a medium effect size using analysis of variance with an alpha of 0.05. Sixty-four participants per group are necessary to ensure sufficient statistical power. An attempt was made to pre-empt the possibility of low recruitment by obtaining ethical clearance to conduct the study in two areas (Highland and Fife). However, only 52 participants were recruited to the study from Highland and Fife combined therefore, the findings must be interpreted with caution.

In addition, the samples were unequal in size, depressed group (23), non-depressed group (29), and examining subsections of the sample (e.g. the separate tests of association between hopelessness and understandability in the depressed and non-depressed groups) reduced the sample size and thus the power further. To some extent statistical tests have been shown to be robust to moderate departures from the assumptions on which they are based (Howell, 1997). However, with small and unequal samples the interpretation of statistical tests becomes more problematic (Howell, 1997).

4.7.2 Cross-sectional design

The study was a cross-sectional design and as such no conclusions can be made about the causal relationship between variables. Given the constraints on time and resources a cross-sectional study was the optimal design for a project of this nature. However, if there had been a sufficient number of participants the predictive power

of the independent variables could have been examined in combination using multiple regression which would have strengthened the study.

4.7.3 Recruitment

In contrast to the non-depressed sample, the researcher did not get the opportunity to meet with depressed patients to explain the study and answer questions. This had to be carried out after the participant had agreed to the researcher contacting them by telephone. Several potential depressed participants declined to take part at this point. In addition, when the study was initially discussed with clinicians in Highland several stated they had suitable patients on their caseloads that they would approach about the study. However, many of these patients were not identified for the researcher to contact. It is possible that the patients were not suitable for inclusion in the study or that they declined to participate.

When the recruitment phase of the study was complete the researcher contacted the relevant clinicians to determine what the obstacles were to recruitment in case they were relevant to the focus of the study, for example, an unwillingness on the part of the older patients to talk about depression. However, there was no indication from the clinicians that there was a systematic reluctance on the part of their older patients to talk about depression. The most common reasons given by clinicians were pressure of work and simply forgetting to mention the research to patients. Given the increasing workload of health professionals it is perhaps not surprising that a research project, which they are not directly involved in, is given low priority. However, the researcher will take account of this experience when recruiting for future research projects. A possible solution would be to provide cues and reminders which help keep the project 'visible' for example, issuing clinicians with a flow-chart that outlines the recruitment process, inclusion criteria and the contact details of the researcher.

4.7.4 The Sample

The non-depressed group were recruited from a population of older adults who attended groups and activities organised by Age Concern (Highland) or the MacKenzie Day Centre (Inverness). Consequently, in general, this sample may represent a more active and less physically disabled group of older adults. Therefore, the findings cannot be generalised to older people who are less interested in attending groups or who are unable to get out of their homes independently (e.g. older people with stroke related paralysis).

The sample of depressed participants by its nature is self-selected. It is possible that depressed older adults who declined to participate in the research may hold more controversial views in relation to the understandability of depression in late life. Therefore, the results may not accurately reflect the nature of the understandability phenomenon in depressed older adults as a whole.

The findings are based on a community dwelling sample of older people. Therefore, they cannot be generalised to older people (depressed and non-depressed) in long-term care (e.g. nursing home residents).

Information on the diagnostic status of participants in the depressed group was not available to the researcher. Therefore, it is not possible to determine whether the participants met criteria for major depressive disorder or clinically significant depressive symptoms. The researcher shares with Lebowitz et al. (1997) the view that clinically significant symptoms are as disabling and deserving of attention as categorical disorder. However, in relation to the debate discussed earlier about the presentation of late life depression, which Blazer (2003) urges is “between ‘true’ clinical depression and less severe depressive symptoms”. The lack of information on diagnostic status is a limitation in so far as no conclusions can be made about the differential effects of depressive disorder and depressive symptoms on the endorsement of the understandability phenomenon.

Lastly, men were underrepresented in both the depressed and non-depressed groups. There were 16 (31 per cent) male participants in the sample as a whole. One reason for this is women have a longer life expectancy than men and this has resulted in the 'feminisation of ageing' (WHO, 2002; WHO, 1999). However, particularly with the non-depressed group there is also the possibility that the source of recruitment (e.g. groups organised by Age Concern) is not as popular among men as women. Men may be less interested in attending groups or activities at day centres. An Age Concern community worker informed the researcher that men are more difficult to engage than women. In relation to the depressed group the higher proportion of women also reflects the increased prevalence of late life depression among women (Blazer, 2003).

4.7.5 The questionnaires

The method of data collection relied solely on participant self-report. Consequently, this increases the possibility of confounding. For example, the items 'I have as much energy as I had last year' (attitude toward own ageing sub-scale) and 'Do you feel full of energy' (GDS) are both semantically related. Thus it is possible, at least in part, that associations between these variables are a result of shared method variance.

The measure of understandability was developed for this study and therefore is not a standardised measure. However, it did demonstrate good reliability within the current sample and the items that comprise the measure were derived from the relevant literature. Furthermore, use of the measure in this sample did not appear prone to response sets (Kline, 1993). For example, there was no evidence that participants avoided extreme judgements and used only the middle of the scale. Similarly, the Rame questionnaire (internalised ageism) has been shown to have good reliability (Parnell, et al., 2001) but has not been standardised on a large sample. This may reduce the extent to which the results of the study can be generalised. Both of these measures will have to be assessed on large samples before substantial claims can be made about their reliability and validity.

The attitude toward own ageing sub-scale was used to measure self-perceptions of ageing. The measure produces a score ranging from 0 to 5, with a higher score indicating a more negative ageing self-perception. A possible criticism of this measure is that the range may not provide sufficient variation in scores which may reduce its discriminatory power. However, the measure showed enough variance in scores to demonstrate a relationship with level of belief in the understandability phenomenon. In addition, the measure has also been utilised successfully by other studies (e.g. Levy et al., 2002).

The BHS was used as a measure of negative attitudes and expectations toward the future. The following is not so much a criticism as an observation of how the BHS performed in the non-depressed group, which may limit the interpretation of the findings. The majority of the non-depressed participants rated themselves in the 'normal range' (0-3). However 48 per cent had scores within the mild to moderate range. A similar finding was reported by Conaghan and Davidson (2002). They found 41 per cent of the non-depressed control group in their study of hopelessness in older parasuicidal adults, had hopelessness scores in the mild to moderate range. Conaghan and Davidson (2002) concluded that perhaps the norms for the BHS needed to be clarified for older adults. The observation from the current study adds weight to this conclusion.

4.8 Conclusions and recommendations for future research

Notwithstanding the limitations of the study, the following conclusions can be made. The belief that late life depression is an expected and normal part of old age was prevalent among a sample of community dwelling depressed and non-depressed older adults. Having established this, it is possible that the belief may be one of the reasons why older adults do not report depressive symptoms to health professionals. However, treatment-seeking behaviour was not addressed in this study.

The understandability phenomenon is not a cognitive symptom of late life depression. Rather it appears more likely to be a function of an older person's beliefs

about ageing and old age. The finding that the understandability phenomenon was significantly related to attitudes toward own ageing and internalised ageism suggests that this is a more fruitful area in which to find explanations for the phenomenon.

The understandability phenomenon appears to be a feature more of the oldest-old than the young-old, particularly those without a partner. It was suggested that being without a partner might be an indication of social isolation. Therefore, it was hypothesised that social isolation may be a factor in the high endorsement of understandability among the old-old.

Given the content of the understandability phenomenon (i.e. depression is normal, and low expectations of treatment) it was suggested that it has the potential to influence the process and outcome of therapy. For example, by hindering engagement in therapy because the patient perceives psychological treatment as inappropriate or because the patient has low expectations of treatment success. Therefore, clinicians may find it useful to assess their older patient's beliefs about late life depression and the treatment of late life depression.

In relation to further work to help take this project forward, given the small sample a replication would be necessary to secure the conclusions described above. Following up on the findings in relation to the old-old a more in-depth examination of this section of the older adult population is required to help elaborate the reasons for the high level of endorsement of understandability. Men were underrepresented in the sample therefore it is important to assess a greater number of older men in relation to understandability.

Further work would have to be undertaken to determine if the understandability measure has any clinical utility. For example, in helping to identify treatment-relevant beliefs, for example, that late life depression is normal or that late life depression is not treatable. There are other important treatment tissues which could be studied in relation to the understandability of depression. For example, a significant minority of older adults do not respond to treatment (Karel and

Hinrichsen, 2000). It would be useful to determine if belief in the understandability of late life depression is a factor in resistance to treatment.

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APPENDIX 1

Summary of focus group discussions on older adults understandings of depression
and the treatment of depression

Discussion Group Results

Jim Law, Ken Laidlaw, Elspeth Salter

Aims of discussion group:

To explore lay understandings of depression and the treatment of depression in a cross section of older people.

To explore the aetiological explanations older people give for the development of depression in later life. Indirectly assessing the 'understandability' phenomena.

To explore the likelihood of older people's willingness to participate in research.

Schedule for discussion group

FOCUSSED GROUP DISCUSSION

LATE LIFE DEPRESSION:

Older adults' beliefs and attitudes about depression and the treatment of depression

LOCATION.....
GROUP MH,.....NMH,.....PH,.....
PARTICIPANTS (Nos).....
FACILITATOR(S).....
DATE.....

Between November 1999
and March 2000,
8 discussion groups have been
facilitated, with a total of 70
participants

What does the term depression mean to you?	Supplementary questions
<p><i>Themes: (in order of freq.)</i></p> <ul style="list-style-type: none"> • Symptom focus very common (e.g. tired, low, crying, sleep, etc) • Internal mental events (e.g. can't think properly, thoughts monotonous, ruminations) very common • Negative appraisals not to common (e.g. self-pitying, feeling sorry for self). • Environmental (e.g. world events) 	<p>When someone becomes depressed what do you think are the reasons they might develop depression?</p> <p><i>Themes (in order of freq.)</i></p> <ul style="list-style-type: none"> • Psychosocial (e.g. being alone/loneliness, isolation, family not interested, lack of company, being dependent upon others) • Activity Deficits (not getting out enough, not being able to do things used to be able to) • Psychological (e.g. worries can make you sad; financial, family, dread of getting wandered, worry about dementia, black thoughts that don't change, loss) • Personality (e.g. its in your nature,

How do people react when they hear someone is depressed? <u>That is, do people react differently when the person is young or old?</u>	Supplementary questions
<ul style="list-style-type: none"> • Understandability e.g. it appears more acceptable that elderly people can be depressed. It is expected for older people to be depressed. Older people are assumed to be depressed, even by med. prof. Older people get on with it. Being old is regarded as being depressing • Intergenerational negative biase: Surprised when hear about younger people being depressed. Younger people shouldn't be depressed, they have no limitations like us (elderly). Younger people do not have any real reason to be depressed. 	<p>Do you think being depressed is something to be ashamed of?</p> <ul style="list-style-type: none"> • No it's an illness, small element of shame and stigma <p>Do you feel there is still a social stigma associated with depression?</p> <ul style="list-style-type: none"> • Yes, but more stigma for younger people, Younger people are supposed to be well because they are young. <p>Would you keep it a secret from other people?</p> <ul style="list-style-type: none"> • Mixed responses People would choose carefully who to discuss with

If you were depressed would you seek help?	Supplementary questions
<ul style="list-style-type: none"> • Yes, Have to be really ill. It is important to talk about feelings get it off your chest. Would not want to worry family. • No. Because your doctor would say you are getting old what do you expect, and therefore would not treat you. You just have to get on with it (our parents had no time to be depressed). Too proud to ask. Nobody understands. Older people just get on with it. 	<p>Who would you turn to for help?</p> <ul style="list-style-type: none"> • Friends, family(S&Ds), doctor, church, minister, Many participants would be too embarrassed to ask for help. <p>Would you feel able to talk to your family doctor about depression?</p> <ul style="list-style-type: none"> • Yes, but depends upon doctor's characteristics

Something we know from research is that older people who are depressed tend not to get as much help as younger people do. What is your opinion on this?	Supplementary questions
<ul style="list-style-type: none"> • Devalued Its regarded as being more natural for older people to be depressed. Younger people have more life expectancy. Younger people are still an asset (to society). Doctors think there is much less that can be done. • Its our own fault: Older people do not complain enough. • Assertive, Older people should get as much help as anyone else. Older people deserve treatment Any treatment should be available for anyone at any age. Infringement of medical ethics 	<p>Do you think older people would benefit as much as younger people from treatment (help)?</p> <ul style="list-style-type: none"> • Yes

How do you feel about treatment for depression? Particularly, how do you feel about being offered <i>therapy</i> (i.e. talking cures) as a treatment for depression?	Supplementary questions
<ul style="list-style-type: none"> • Positive: Talking helps. Should always start with talking, do not know what a pill can do. It's a good idea, would prefer it to medication. Hate pills. Better than pills – too many pills are given out. Important to be stimulated, pills do the opposite • Neutral: No objections • Negative: Psychologists -Oh my god. Not aware that therapy is available. Don't get offered this help. Is it on the NHS? 	<p>How effective do you think <i>therapy</i> is?</p> <ul style="list-style-type: none"> • Very, because it is good to get things off your chest. Is it selfish burdening a stranger with your problems. I like the honesty of the situation. <p>Can you think of any reasons why older people might be unwilling to have this kind of treatment?</p> <ul style="list-style-type: none"> • Concerns regarding effectiveness • Concerns regarding ability to follow what goes on in therapy • Embarrassment • Unknown <p>Do you think older adults are too old for this type of treatment?</p> <ul style="list-style-type: none"> • NO

Treatment continued: How do you feel about being offered <i>medication</i> (antidepressants) as a treatment for depression?	Supplementary questions
<ul style="list-style-type: none"> • Positive: Yes. Useful short term remedy. Some people like medication as it is easy solution (least effort). If it helps, I'm for it. • Neutral: Would take medic., if Dr. suggests it • Negative: Medication just covers things up, hides what is going. Do not like it- fear of dependency. Take enough pills. Medication is last resort. 	<p>How effective do think <i>medication</i> is?</p> <ul style="list-style-type: none"> • Doesn't get to the root of the problem. Can be overdone. Not as effective as talking, but it can help. Can still be depressed when medication is finished. <p>Can you think of any reasons why older people might be unwilling to have this type of treatment?</p> <ul style="list-style-type: none"> • Already take too many tablets. • Worry about addiction • Worry about side effects <p>Do you think older adults are too old for this type of treatment?</p> <ul style="list-style-type: none"> • No

How do you feel about taking part in research?	Supplementary questions
<ul style="list-style-type: none"> • No problems with participation • Altruistic: hope benefit others • Enjoyable 	<p>What might your fears/concerns be about taking part in research?</p> <ul style="list-style-type: none"> • Unclear about purpose of research, confused • Loss of control - guinea pigs <p>What might make it easier for you?</p> <ul style="list-style-type: none"> • Explanation • Be fully informed

APPENDIX 2

Information sheet for Highland and Fife

Information sheet

Older adults' understandings of depression

Thank you for reading this.

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the study about?

The way we think about events and experiences can influence how we react to them. Depression is the most common mental health problem among older adults. Despite this, only a minority of depressed older adults receive treatment. One explanation which has been suggested, is that there are good reason for depression in late life. The aim of this study is to find out what people over 60 years think about depression.

Why have I been chosen?

Two groups of people are being asked to take part in the study, people who are currently receiving treatment for depression and people who are not currently depressed. Having two groups will allow us to compare both, to see if there is any difference in what depressed and non depressed people think about depression. You have been invited to participate because, at the moment, you fit one of these categories and you are also age 60 or above.

Do I have to take part in the study?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information leaflet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect the standard of care you receive.

If I decide to join the study what will it involve?

If you decide to join the study you will complete five short questionnaires which will ask you what you think about depression, about old age in general, and about your own ageing. The other questionnaires will ask you to rate your mood and how optimistic you feel about the future. You will

only be asked to complete the questionnaires on one occasion. Therefore, your involvement in the research should last for approximately 35 minutes.

What are the possible benefits of taking part in the study?

There is no direct benefit to you by participating in the study. However, the information you provide will help us find out if older people have beliefs which prevent them from obtaining help for depression. This information may help us respond better to, and become more aware of depression in older people.

Will my participation in the study be kept confidential?

The information that you provide will be kept strictly confidential. The only person with access to the information will be the principal researcher. All of the information kept by the researcher will have your name removed so that you cannot be recognised from it.

What will happen to the results of the study?

The results will be included in a thesis submitted to the University of Edinburgh by the principal researcher. You will not be identified in any publication which may be produced from this research.

Who has reviewed the study?

The study has been reviewed by Highland Health Research Ethics Committee.

Independent advice

Dr Nicola Urquhart is available to offer independent advice about the project. If you have any queries about the project or require further information Dr Urquhart can be contacted at the address below.

Dr Nicola Urquhart
Area Clinical Psychology Service
New Craigs
6-16 Leachkin Road
Inverness IV3 8NP
Telephone 01463 704683

***You will be given a copy of the information sheet and a signed consent form to keep.
Thank you for taking part in this study.***

Information sheet

Older adults' understandings of depression

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Chairman: Dr James Gallacher
Chief Executive: George J Brechin

will only be asked to complete the questionnaires on one occasion. Therefore, your involvement in the research should last for approximately 35 minutes.

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Will my participation in the study be kept confidential?

The information that you provide will be kept strictly confidential. The only person with access to the information will be the principal researcher. All of the information kept by the researcher will have your name removed so that you cannot be recognised from it. Your GP will be informed of your participation in the research study.

What will happen to the results of the study?

The results will be included in a thesis submitted to the University of Edinburgh by the principal researcher. You will not be identified in any publication which may be produced from this research.

Who has reviewed the study?

The study has been reviewed by Fife Health Board Research Ethics Committee.

If you have any queries about the study or require further information please contact:

Jim Law
Principal Researcher
Area Clinical Psychology Service
New Craigs
6-16 Leachkin Road
Inverness IV3 8NP
Telephone 01463 704683
Email: jim.law@hpct.scot.nhs.uk

or

Ken Laidlaw
Research Supervisor
Department of Clinical Psychology
Stratheden Hospital
Cupar
Fife KY15 6RR
01334 652611 ext 336
Email: k.laidlaw@ed.ac.uk

***You will be given a copy of the information sheet and a signed consent form to keep.
Thank you for taking part in this study.***

APPENDIX 3

Consent form for Highland and Fife



Patient Consent Form

Older adults' understandings of depression
Principal Researcher: Jim Law

Please complete the following section yourself

I confirm that I have read the information sheet dated.....(version.....)
For the above study and have had the opportunity to ask questions.

please initial

I understand my participation is voluntary and that I am free to withdraw at any
time, without giving any reason, without my medical care or legal rights being
affected.

I agree to take part in the above study.

I decline to take part in this study.

Patient's Name

..... Signature.....

Date.....

Researcher's Name

..... Signature.....

Date.....

Name of person taking consent
(if different from researcher)

..... Signature.....

Date.....





Patient Consent Form

Older adults’ understandings of depression
Principal Researcher: Jim Law

Please complete the following section yourself

please initial

I confirm that I have read the information sheet dated.....(version 1)
For the above study and have had the opportunity to ask questions.

I understand my participation is voluntary and that I am free to withdraw at any
time, without giving any reason, without my medical care or legal rights being
affected.

I agree to take part in the above study.

Patient’s Name

..... Signature.....

Date.....

Researcher’s Name

..... Signature.....

Date.....

Name of person taking consent
(if different from researcher)

..... Signature.....

Date.....



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APPENDIX 4

Demographic interview

Older person's attitudes toward depression

ABOUT YOU

Before you begin we would like to ask you to answer a few general questions about yourself.

1. What is your gender?

- Male
- Female

2. What is your date of birth?

_____/_____/_____
Day Month Year

3. What is your marital status?

- Single
- Married
- Partnered (other than married)
- Separated/Divorced (not currently partnered)
- Widowed

4. What is the highest education level you received?

- Primary school
- High school
- Trade or technical certificate
- College diploma or degree
- University degree
- Other: Please specify

5. What is/was your occupation? _____

6. Living arrangements:

- Living at home (supported by family/carers or partner)
- Living with family but not in own home
- Living at home (unsupported by family/carer or partner)
- Living in residential care
- Living in sheltered housing/community care
- Living in nursing home/long-stay patient ward (hospital)
- Other: Please specify

7. In general do you consider yourself to be currently healthy or unhealthy?

- Healthy
- Unhealthy

8. Please provide details of any medical condition(s) you have which you feel might affect your quality of life?

9. If you have a medical condition, do you take any medication for it?

- Yes
- No

10. Please indicate on the line below how much pain you experience on a daily basis as a result of your medical conditions.

No Pain _____ **Severe Pain**

11. In the past has your doctor treated you for depression?

- Yes
- No

APPENDIX 5

Understandability measure

ATD

Instructions: Below is a description of depression followed by a list of attitudes or beliefs which people may hold about depression. Please read each statement carefully and circle the number that indicates how much you agree or disagree with the statement, this can often be your first response.

Depression is a prolonged feeling of sadness which can be characterised by the following changes; a loss of enjoyment or interest in normal activities, fatigue or a loss of energy, feelings of worthlessness or guilt, sleep and appetite disturbance, and poor concentration. A sense of hopelessness is often part of depression and can sometimes lead to thoughts of suicide.

1. Given the losses and chronic illnesses that older people experience, depression is understandable.

Agree Strongly 1 2 3 4 5 6 7 Disagree Strongly

2. Depression is just a normal part of old age.

Agree Strongly 1 2 3 4 5 6 7 Disagree Strongly

3. When older people get depressed, there is not much that can be done about it.

Agree Strongly 1 2 3 4 5 6 7 Disagree Strongly

4. Younger people have little reason to be depressed.

Agree Strongly 1 2 3 4 5 6 7 Disagree Strongly

5. Younger people are not expected to be depressed because they are young.

Agree Strongly 1 2 3 4 5 6 7 Disagree Strongly

Thank you for completing this questionnaire.

APPENDIX 6

Geriatric Depression Scale

G. D. SCREENING SCALE (SHORT FORM)

Please answer all the following questions by ringing either 'YES' or 'NO'

- | | |
|--|---------------|
| 1. Are you basically satisfied with your life? | YES/NO |
| 2. Have you dropped many of your activities and interests? | YES/NO |
| 3. Do you feel that your life is empty? | YES/NO |
| 4. Do you often get bored? | YES/NO |
| 5. Are you in good spirits most of the time? | YES/NO |
| 6. Are you afraid that something bad is going to happen to you? | YES/NO |
| 7. Do you feel happy most of the time? | YES/NO |
| 8. Do you often feel helpless? | YES/NO |
| 9. Do you prefer to stay at home, rather than going out and doing new things? | YES/NO |
| 10. Do you feel you have more problems with memory than most? | YES/NO |
| 11. Do you think it is wonderful to be alive now? | YES/NO |
| 12. Do you feel pretty worthless the way you are now? | YES/NO |
| 13. Do you feel full of energy? | YES/NO |
| 14. Do you feel that your situation is hopeless? | YES/NO |
| 15. Do you think that most people are better off than you? | YES/NO |

APPENDIX 7

Beck Hopelessness Scale (BHS)

Name: _____ Marital Status: _____ Age: _____ Sex: _____

Occupation: _____ Education: _____

This questionnaire consists of 20 statements. Please read the statements carefully one by one. If the statement describes your attitude for the **past week including today**, darken the circle with a 'T' indicating TRUE in the column next to the statement. If the statement does not describe your attitude, darken the circle with an 'F' indicating FALSE in the column next to this statement. **Please be sure to read each statement carefully.**

- | | | |
|--|-----|-----|
| 1. I look forward to the future with hope and enthusiasm. | (T) | (F) |
| 2. I might as well give up because there is nothing I can do about making things better for myself. | (T) | (F) |
| 3. When things are going badly, I am helped by knowing that they cannot stay that way forever. | (T) | (F) |
| 4. I can't imagine what my life would be like in ten years. | (T) | (F) |
| 5. I have enough time to accomplish the things I want to do. | (T) | (F) |
| 6. In the future, I expect to succeed in what concerns me most. | (T) | (F) |
| 7. My future seems dark to me. | (T) | (F) |
| 8. I happen to be particularly lucky, and I expect to get more of the good things in life than the average person. | (T) | (F) |
| 9. I just can't get the breaks, and there's no reason I will in the future. | (T) | (F) |
| 10. My past experiences have prepared me well for the future. | (T) | (F) |
| 11. All I can see ahead of me is unpleasantness rather than pleasantness. | (T) | (F) |
| 12. I don't expect to get what I really want. | (T) | (F) |
| 13. When I look ahead to the future, I expect that I will be happier than I am now. | (T) | (F) |
| 14. Things just won't work out the way I want them to. | (T) | (F) |
| 15. I have great faith in the future. | (T) | (F) |
| 16. I never get what I want, so it's foolish to want anything. | (T) | (F) |
| 17. It's very unlikely that I will get any real satisfaction in the future. | (T) | (F) |
| 18. The future seems vague and uncertain to me. | (T) | (F) |
| 19. I can look forward to more good times than bad times. | (T) | (F) |
| 20. There's no use in really trying to get anything I want because I probably won't get it. | (T) | (F) |



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APPENDIX 8

Attitudes to own ageing sub-scale of the
Philadelphia Geriatric Centre Morale Scale (PGCMS)

PGCM Scale

Instructions: Please read each statement carefully and tick the box that most closely reflects your own view, this can often be your first response.

1. Things keep getting worse as I get older.	Yes	No
2. I have as much energy as I had last year.	Yes	No
3. As you get older, you are less useful.	Yes	No
4. As I get older, things are (better/worse) than I thought they would be.	Better	Worse
5. I am as happy now as I was when I was younger.	Yes	No

Thank you for completing this questionnaire.

APPENDIX 9

The Rame Questionnaire

THE RAME QUESTIONNAIRE

We are interested if you would answer these questions based on how you have been feeling over the past few weeks.

Please read each item and circle your **first** considered response.

1. I am keeping in touch with today's society.	Disagree strongly	Disagree	Agree	Agree strongly
2. As I got older I became a more efficient worker.	Disagree strongly	Disagree	Agree	Agree strongly
3. As I get older I am becoming more of a burden to my relatives.	Disagree strongly	Disagree	Agree	Agree strongly
4. My moral values are relevant in today's world.	Disagree strongly	Disagree	Agree	Agree strongly
5. My best achievements are in the past.	Disagree strongly	Disagree	Agree	Agree strongly
6. As I get older I move around far less.	Disagree strongly	Disagree	Agree	Agree strongly
7. I feel I am just as capable of engaging in satisfying sexual activity as when I was younger	Disagree strongly	Disagree	Agree	Agree strongly
8. My health is surprisingly good.	Disagree strongly	Disagree	Agree	Agree strongly
9. As I get older I need someone to keep an eye on me.	Disagree strongly	Disagree	Agree	Agree strongly
10. Hearing loss embarrasses me.	Disagree strongly	Disagree	Agree	Agree strongly
11. As I get older I find that I tend to get confused.	Disagree strongly	Disagree	Agree	Agree strongly
12. As I get older my memory is getting worse.	Disagree strongly	Disagree	Agree	Agree strongly
13. My eyesight is definitely failing.	Disagree strongly	Disagree	Agree	Agree strongly
14. I feel that my old age has been full of exciting opportunities.	Disagree strongly	Disagree	Agree	Agree strongly
15. I think that within a few years I shall be in a hospital/home rather than living in my own home.	Disagree strongly	Disagree	Agree	Agree strongly
16. As I've got older I'm less able to practice good table manners.	Disagree strongly	Disagree	Agree	Agree strongly
17. I feel that I am quite capable of learning new skills.	Disagree strongly	Disagree	Agree	Agree strongly
18. I need medicines to keep me going.	Disagree strongly	Disagree	Agree	Agree strongly
19. As I get older I'm getting more forgetful.	Disagree strongly	Disagree	Agree	Agree strongly
20. I move around far less than when I was young.	Disagree strongly	Disagree	Agree	Agree strongly
21. I still have a desire for sex.	Disagree strongly	Disagree	Agree	Agree strongly
22. I have a surprisingly good state of health.	Disagree strongly	Disagree	Agree	Agree strongly
23. As I get older I'm getting more forgetful	Disagree strongly	Disagree	Agree	Agree strongly

APPENDIX 10

Six Item Cognitive Impairment Test

6CIT

	Maximum error	Score	Weight	Weighted score
1. What year is it now?	1	x	4	=
2. What month is it now?	1	x	3	=

Memory Phrase – *repeat after me:*

“John / Brown / 42 / West Street / Bedford”

3. About what time is it (within 1 hr)?	1	x	3	=
4. Count backwards from 20 to 1?	2	x	2	=
5. Say months of the year in reverse order?	2	x	2	=
6. Repeat the memory phrase ?	5	x	2	=

(Score 1 for each incorrect response)

Total =
.....

APPENDIX 11

Summary table for ANCOVA (Hypothesis 1)

Descriptive Statistics

Dependent Variable: understandability 3

Geriatric Depression	Mean	Std. Deviation	N
depressed (5 or more)	14.39	5.09	23
not depressed (less than 5)	13.00	4.60	29
Total	13.62	4.82	52

Levene's Test of Equality of Error Variances^a

Dependent Variable: understandability 3

F	df1	df2	Sig.
.299	1	50	.587

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+MEDCONS+AGE+GDCUTOFF

Tests of Between-Subjects Effects

Dependent Variable: understandability 3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	462.901 ^a	3	154.300	10.238	.000
Intercept	3.712	1	3.712	.246	.622
MEDCONS	224.830	1	224.830	14.918	.000
AGE	113.815	1	113.815	7.552	.008
GDCUTOFF	14.379	1	14.379	.954	.334
Error	723.407	48	15.071		
Total	10826.000	52			
Corrected Total	1186.308	51			

a. R Squared = .390 (Adjusted R Squared = .352)

Geriatric Depression Scale cut-off

Dependent Variable: understandability 3

Geriatric Depression Scale cut-off	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
depressed (5 or more)	14.225 ^a	.824	12.568	15.881
not depressed (less than 5)	13.132 ^a	.731	11.662	14.602

a. Evaluated at covariates appeared in the model: number of medical conditions = 1.46, age in years = 75.35.

APPENDIX 12

Summary table for ANCOVA (Hypothesis 3)

Descriptive Statistics

Dependent Variable: Attitude toward own aging subscale

UP greater than	Mean	Std. Deviation	N
high belief	3.17	1.47	29
low belief	1.83	1.37	23
Total	2.58	1.56	52

Levene's Test of Equality of Error Variances^a

Dependent Variable: Attitude toward own aging subscale

F	df1	df2	Sig.
.055	1	50	.816

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+GDS+BHS+UPSPLIT1

Tests of Between-Subjects Effects

Dependent Variable: Attitude toward own aging subscale

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	62.007 ^a	3	20.669	15.827	.000
Intercept	27.539	1	27.539	21.088	.000
GDS	7.547	1	7.547	5.779	.020
BHS	3.979	1	3.979	3.047	.087
UPSPLIT1	10.139	1	10.139	7.763	.008
Error	62.685	48	1.306		
Total	470.000	52			
Corrected Total	124.692	51			

a. R Squared = .497 (Adjusted R Squared = .466)

Estimated Marginal Means

UP greater than equal to 13

Dependent Variable: Attitude toward own aging subscale

UP greater than equal to 13	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
high belief	2.986 ^a	.216	2.552	3.420
low belief	2.061 ^a	.244	1.571	2.551

a. Evaluated at covariates appeared in the model: Geriatric Depression Scale = 5.02, Beck Hopelessness Scale = 5.54.

APPENDIX 13

Summary table for ANCOVA (Hypothesis 4)

Descriptive Statistics

Dependent Variable: Internalised ageism questionnaire

UP greater than	Mean	Std. Deviation	N
high belief	33.45	8.30	29
low belief	25.52	9.64	23
Total	29.94	9.68	52

Levene's Test of Equality of Error Variances^a

Dependent Variable: Internalised ageism questionnaire

F	df1	df2	Sig.
2.235	1	50	.141

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+GDS+BHS+UPSPLIT1

Tests of Between-Subjects Effects

Dependent Variable: Internalised ageism questionnaire

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1464.821 ^a	3	488.274	7.064	.001
Intercept	10311.983	1	10311.983	149.179	.000
GDS	17.545	1	17.545	.254	.617
BHS	221.999	1	221.999	3.212	.079
UPSPLIT1	420.088	1	420.088	6.077	.017
Error	3318.006	48	69.125		
Total	51403.000	52			
Corrected Total	4782.827	51			

a. R Squared = .306 (Adjusted R Squared = .263)

Estimated Marginal Means

UP greater than equal to 13

Dependent Variable: Internalised ageism questionnaire

UP greater than equal to 13	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
high belief	32.575 ^a	1.571	29.415	35.734
low belief	26.623 ^a	1.773	23.060	30.187

a. Evaluated at covariates appeared in the model: Geriatric Depression Scale = 5.02, Beck Hopelessness Scale = 5.54.